FUNAI

SERVICE MANUAL

Main Section
- Specifications
- Preparation for Servicing
- Adjustment Procedures
- Schematic Diagrams
- CBA's
- Exploded views
- Parts List

When servicing the deck mechanism, refer to MK14 Deck Mechanism Section.

Deck Mechanism Part No.: N25E0FL

DVD RECORDER & VIDEO CASSETTE RECORDER

W4A-A4180DB/ W4A-D4180DB/ W4D-D4180DB

VHS PAL

MAIN SECTION

DVD RECORDER & VIDEO CASSETTE RECORDER

W4A-A4180DB/W4A-D4180DB/ W4D-D4180DB

Main Section

- **Specifications**
- **Preparation for Servicing**
- **Adjustment Procedures**
- **Schematic Diagrams**
- **CBA's**
- **Exploded Views**
- **Parts List**

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SPECIFICATIONS

< VCR Section >

Description	Unit	Minimum	Nominal	Maximum	Remark
1. Video					
1-1. Video Output (PB)	Vp-p	0.8	1.0	1.2	SP Mode
1-2. Video Output (R/P)	Vp-p	0.8	1.0	1.2	
1-3. Video S/N Y (R/P)	dB	40	45		SP Mode, W/O Burst
1-4. Video Color S/N AM (R/P)	dB	37	41		SP Mode
1-5. Video Color S/N PM (R/P)	dB	30	36		SP Mode
1-6. Resolution (PB)	Line	230	245		SP Mode
2. Servo					
2-1. Jitter Low	µsec		0.07	0.12	SP Mode
2-2. Wow & Flutter	%		0.3	0.5	SP Mode
3. Normal Audio					
3-1. Output (PB)	dBV	-9	-4	-3	SP Mode
3-2. Output (R/P)	dBV	-9	-4	-1.5	SP Mode
3-3. S/N (R/P)	dB	36	41		SP Mode
3-4. Distortion (R/P)	%		1.0	4.0	SP Mode
3-5. Freq. resp (R/P) at 200Hz	dB	-6	-2		SP Mode
(-20dB ref. 1kHz) at 8kHz	dB	-8	-2		SP Mode
4. Tuner					
4-1. Video output	Vp-p	0.8	1.0	1.2	E-E Mode
4-2. Video S/N	dB	39	44		E-E Mode
4-3. Audio output	dB	-10	-6	-2	E-E Mode
4-4. Audio S/N	dB	40	46		E-E Mode
5. Hi-Fi Audio					
5-1. Output	dBV	-12	-9	-4	SP Mode
5-2. Dynamic Range	dB	70	85		SP Mode
5-3. Freq. resp (6dB B.W)	Hz		20 ~ 20K		SP Mode

Note: Nominal specs represent the design specs. All units should be able to approximate these – some will exceed and some may drop slightly below these specs. Limit specs represent the absolute worst condition that still might be considered acceptable; In no case should a unit fail to meet limit specs.

< DVD Section >

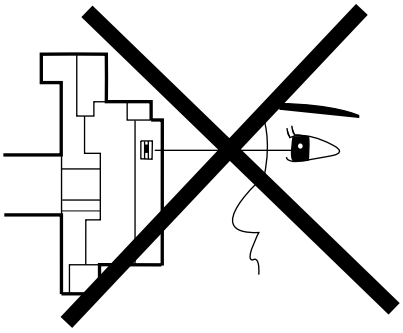
Item	Conditions	Unit	Nominal	Limit
1. VIDEO				
1-1. Video Output	75 Ω load	Vp-p	1.0	
1-2. S-Video Output				
Y (Luminance)	75 Ω load	Vp-p	1.0	
C (Chrominance)	75 Ω load	Vp-p	0.3	
2. AUDIO				
2-1. Output Level		Vrms	2.0	
2-2. Frequency Response				
DVD-VIDEO LPCM	fs = 96 kHz	Hz	20 - 44 k	
	fs = 48 kHz	Hz	20 - 20 k	
Audio CD	fs = 44.1 kHz	Hz	20 - 20 k	
2-3. Signal/Noise Ratio				
DVD-VIDEO LPCM		dB	85	
CD		dB	85	
REC & Playback	Input: 2 Vrms, Rec Speed: SP	dB	85	
2-4. THD+N	1 kHz, 0 dB			
DVD-VIDEO LPCM		%	0.01	
CD		%	0.01	
REC & Playback	Input: 2 Vrms, Rec Speed: SP	%	0.01	
3. TUNER				
3-1. Video Output	75 Ω load	Vp-p	1.0	
3-2. Video S/N		dB	42	
3-3. Audio Output		dBv	-12	
3-4. Audio S/N		dB	46	

Notes:

1. All Items are measured without pre-emphasis unless otherwise specified.
2. Power supply: 220 - 240 V ~ 50 Hz
3. Load imp.: 100 kΩ
4. Room ambient : 5 °C ~ 40 °C

LASER BEAM SAFETY PRECAUTIONS

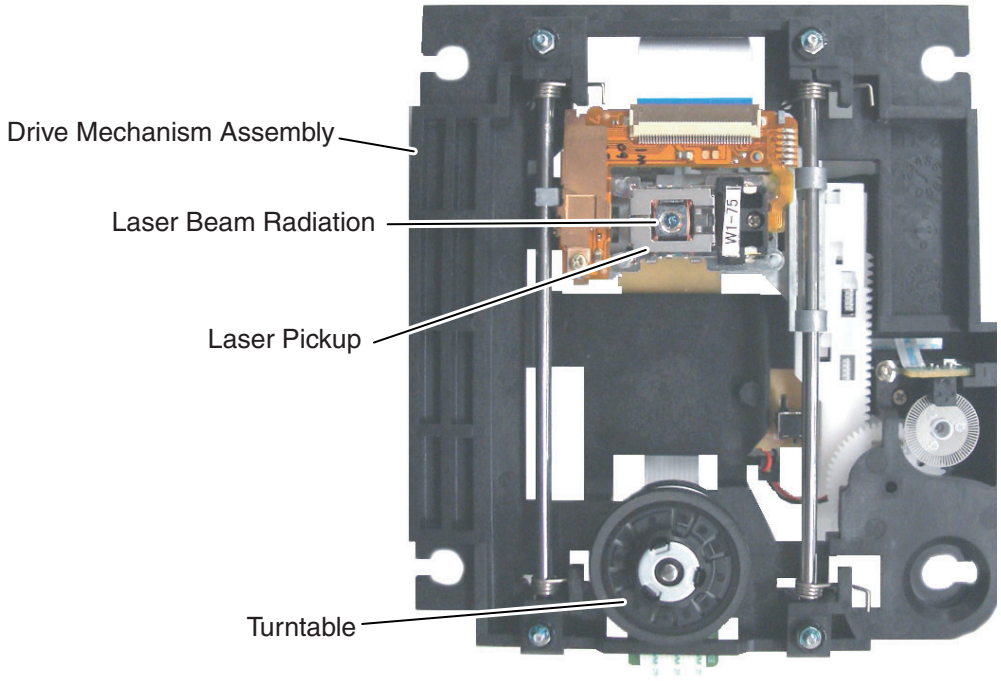
This DVD player uses a pickup that emits a laser beam.

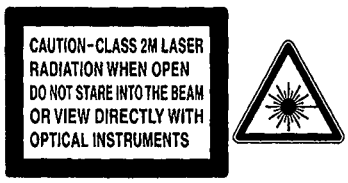


Do not look directly at the laser beam coming from the pickup or allow it to strike against your skin.

The laser beam is emitted from the location shown in the figure. When checking the laser diode, be sure to keep your eyes at least 30 cm away from the pickup lens when the diode is turned on. Do not look directly at the laser beam.

CAUTION: Use of controls and adjustments, or doing procedures other than those specified herein, may result in hazardous radiation exposure.





Location: Inside Top of DVD mechanism.

IMPORTANT SAFETY PRECAUTIONS

Product Safety Notice

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a ⚠ on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The Product's Safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are carefully inspected to confirm with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced**.**

Precautions during Servicing

A. Parts identified by the ⚠ symbol are critical for safety. Replace only with part number specified.

B. In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements.
Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.

C. Use specified internal wiring. Note especially:

1)Wires covered with PVC tubing

2)Double insulated wires

3)High voltage leads

D. Use specified insulating materials for hazardous live parts. Note especially:

1)Insulation tape

2)PVC tubing

3)Spacers

4)Insulators for transistors

E. When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.

F. Observe that the wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).

G. Check that replaced wires do not contact sharp edges or pointed parts.

H. When a power cord has been replaced, check that 5 - 6 kg of force in any direction will not loosen it.

I. Also check areas surrounding repaired locations.

J. Be careful that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

K. When connecting or disconnecting the internal connectors, first, disconnect the AC plug from the AC outlet.

Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts, and wires have been returned to their original positions. Afterwards, do the following tests and confirm the specified values to verify compliance with safety standards.

1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

Table 1 : Ratings for selected area

AC Line Voltage	Clearance Distance (d), (d')
220 to 240 V	≥ 3 mm(d) ≥ 6 mm(d')

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

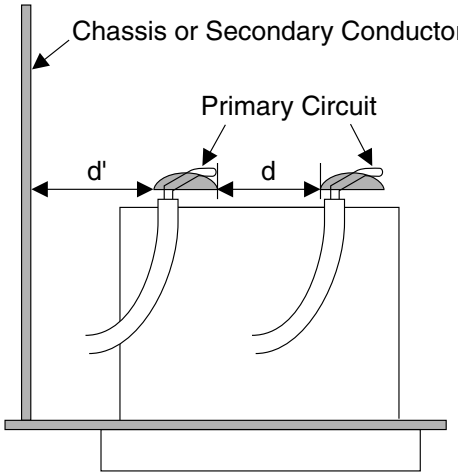


Fig. 1

2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) is lower than or equal to the specified value in the table below.

Measuring Method (Power ON) :

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across the terminals of load Z. See Fig. 2 and the following table.

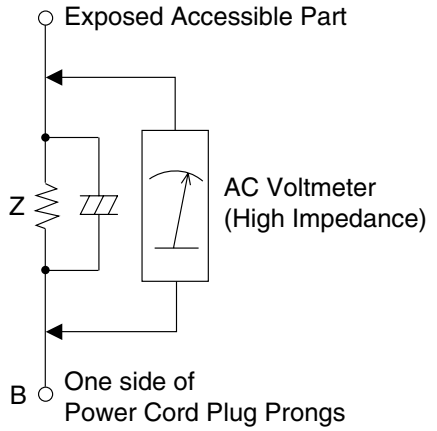


Fig. 2

Table 2: Leakage current ratings for selected areas

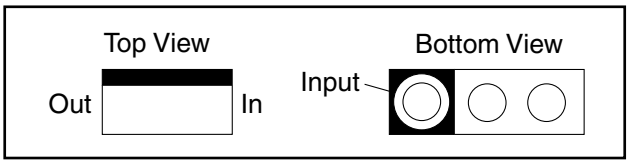
AC Line Voltage	Load Z	Leakage Current (i)	One side of power cord plug prongs (B) to:
220 to 240 V	2kΩ RES. Connected in parallel	i≤0.7mA AC Peak i≤2mA DC	RF or Antenna terminals
	50kΩ RES. Connected in parallel	i≤0.7mA AC Peak i≤2mA DC	A/V Input, Output

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

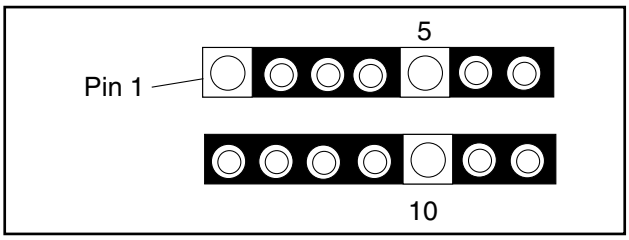
STANDARD NOTES FOR SERVICING

Circuit Board Indications

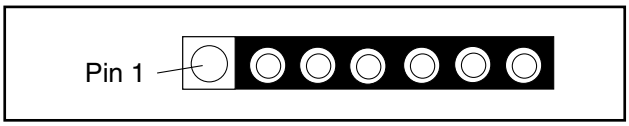
1. The output pin of the 3 pin Regulator ICs is indicated as shown.



2. For other ICs, pin 1 and every fifth pin are indicated as shown.

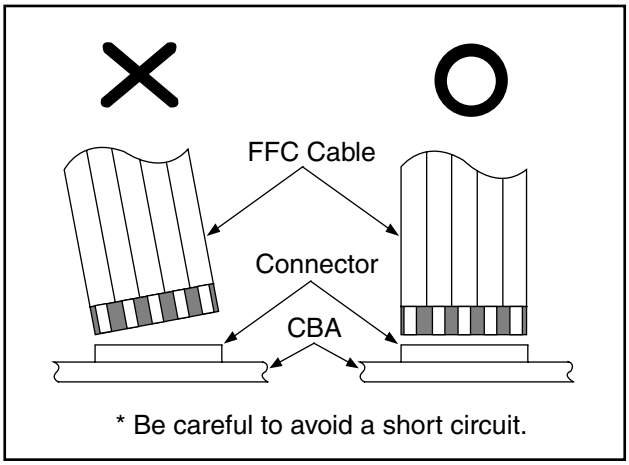


3. The 1st pin of every male connector is indicated as shown.



Instructions for Connectors

1. When you connect or disconnect the FFC (Flexible Foil Connector) cable, be sure to first disconnect the AC cord.
2. FFC (Flexible Foil Connector) cable should be inserted parallel into the connector, not at an angle.



Pb (Lead) Free Solder

When soldering, be sure to use the Pb free solder.

How to Remove / Install Flat Pack-IC

1. Removal

With Hot-Air Flat Pack-IC Desoldering Machine:

1. Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)

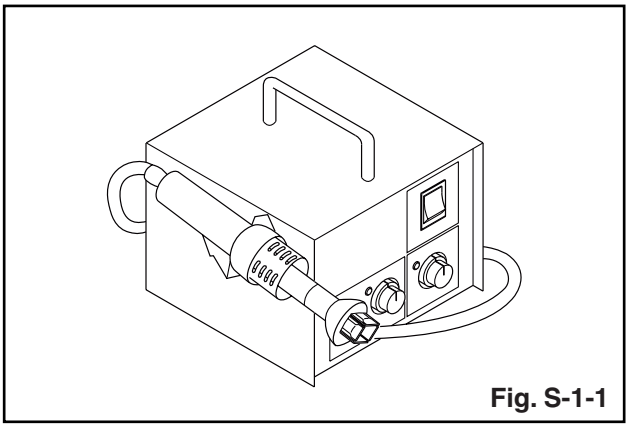


Fig. S-1-1

2. Remove the flat pack-IC with tweezers while applying the hot air.
3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

CAUTION:

1. The Flat Pack-IC shape may differ by models. Use an appropriate hot-air flat pack-IC desoldering machine, whose shape matches that of the Flat Pack-IC.
2. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)

3. The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

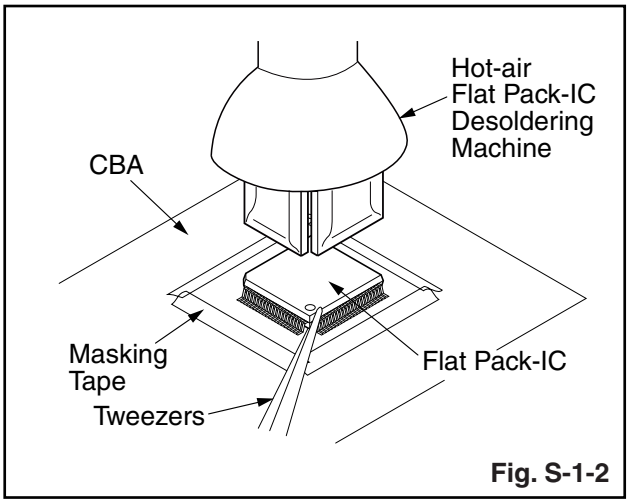


Fig. S-1-2

With Soldering Iron:

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)

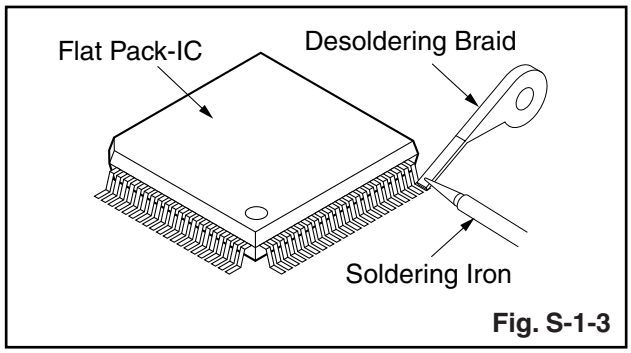


Fig. S-1-3

2. Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)

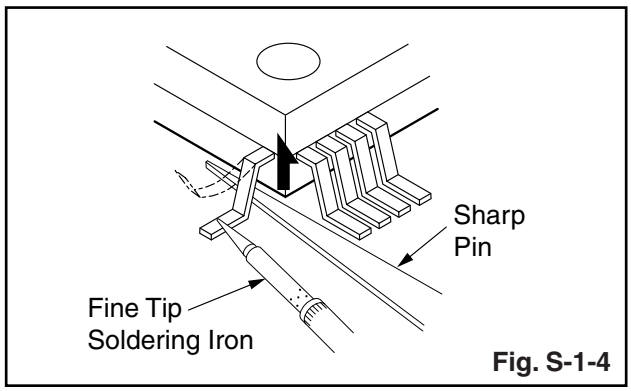


Fig. S-1-4

3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

With Iron Wire:

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)
2. Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.
3. While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig. S-1-5.
4. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
5. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

Note: When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.

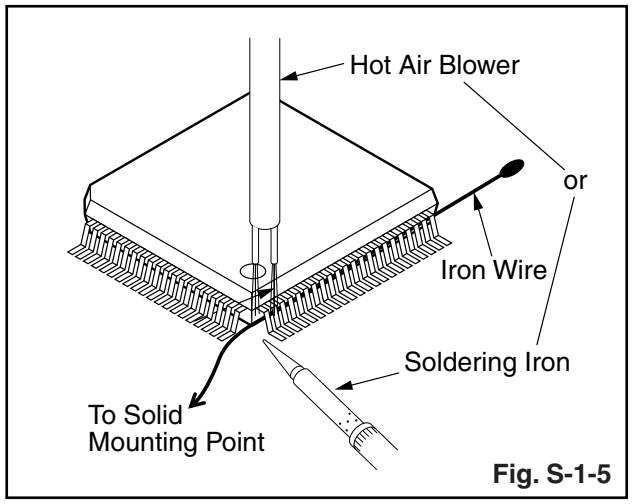


Fig. S-1-5

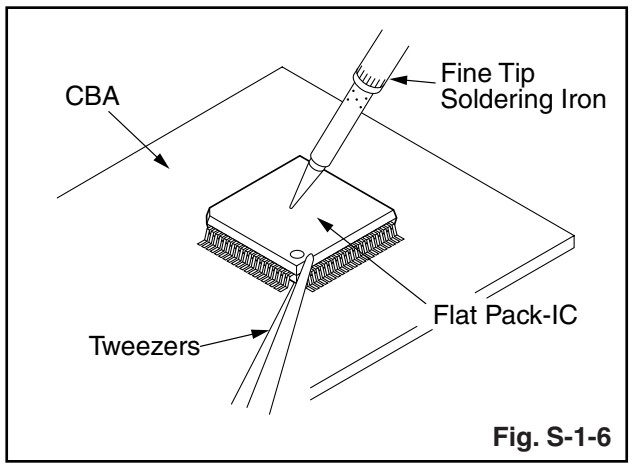


Fig. S-1-6

2. Installation

1. Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.
2. The "●" mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then presolder the four corners of the flat pack-IC. (See Fig. S-1-8.)
3. Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.

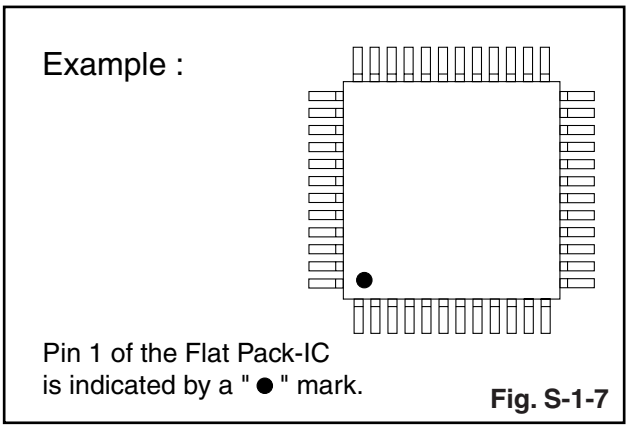


Fig. S-1-7

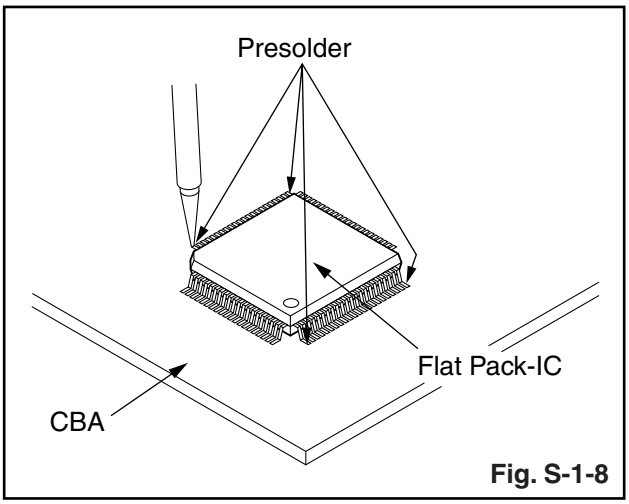


Fig. S-1-8

Instructions for Handling Semi-conductors

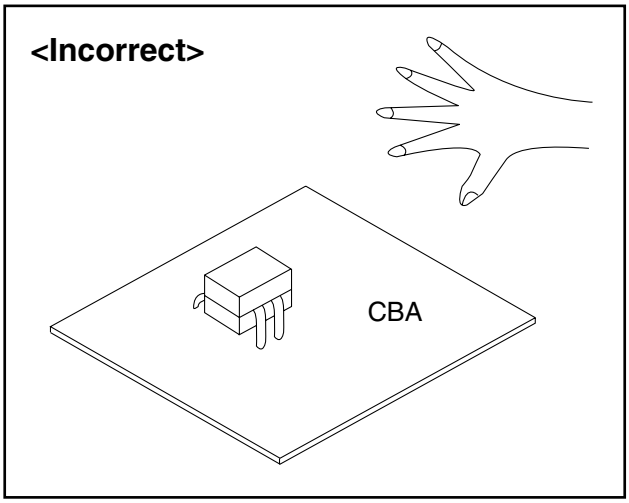
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

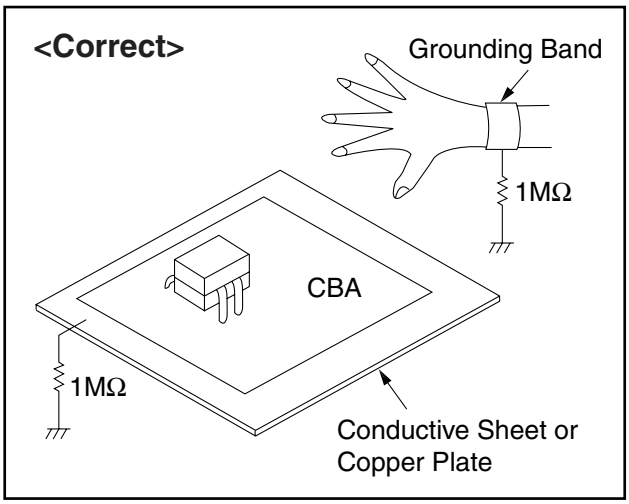
1. Ground for Human Body

Be sure to wear a grounding band (1 MΩ) that is properly grounded to remove any static electricity that may be charged on the body.

2. Ground for Workbench

Be sure to place a conductive sheet or copper plate with proper grounding (1 MΩ) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semi-conductors with your clothing.





PREPARATION FOR SERVICING

How to Enter the Service Mode

About Optical Sensors

Caution:

An optical sensor system is used for the Tape Start and End Sensors on this equipment. Carefully read and follow the instructions below. Otherwise the unit may operate erratically.

What to do for preparation

Insert a tape into the Deck Mechanism Assembly and press the [PLAY] (VCR) button. The tape will be loaded into the Deck Mechanism Assembly. Make sure the power is on, connect TP501 (S-INH) to GND. This will stop the function of Tape Start Sensor, Tape End Sensor and Reel Sensors. (If these TPs are connected before plugging in the unit, the function of the sensors will stay valid.) See Fig. 1.

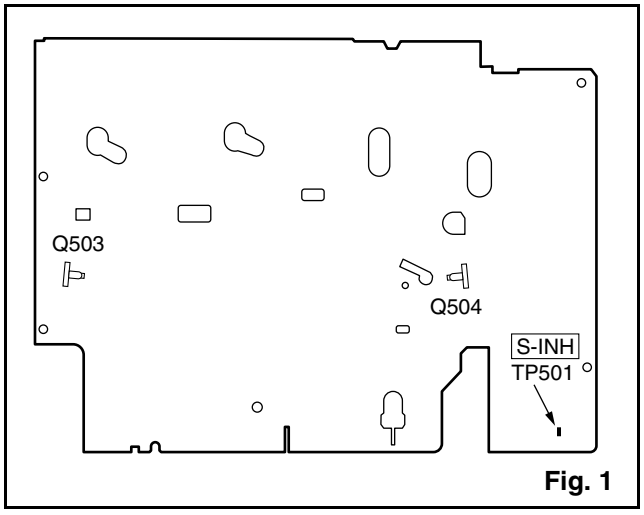


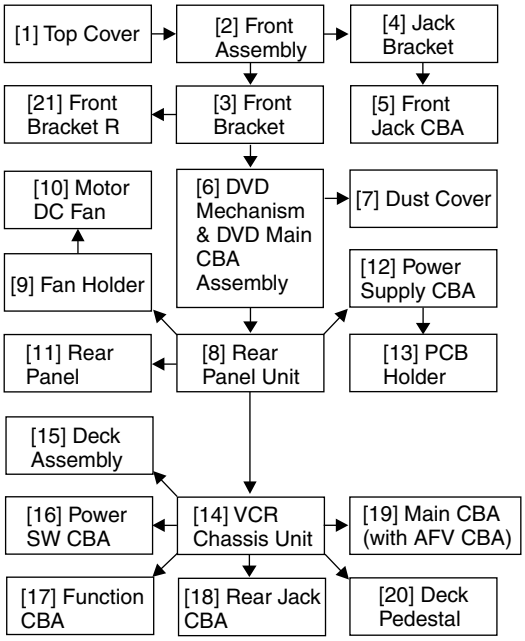
Fig. 1

Note: Because the Tape End Sensors are inactive, do not run a tape all the way to the start or the end of the tape to avoid tape damage.

CABINET DISASSEMBLY INSTRUCTIONS

1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route, and dress the cables as they were originally.



2. Disassembly Method

ID/ LOC. No.	PART	REMOVAL		
		Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	Note
[1]	Top Cover	D1	7(S-1)	---
[2]	Front Assembly	D2	*5(L-1), *3(L-2), *CN1505	1
[3]	Front Bracket	D2	2(S-2), (S-3)	---
[4]	Jack Bracket	D3	2(S-4)	---
[5]	Front Jack CBA	D3	Jack Earth Plate	---
[6]	DVD Mechanism & DVD Main CBA Assembly	D4	4(S-5), *CN101, *CN701	4
[7]	Dust Cover	D4	----------	---
[8]	Rear Panel Unit	D5	4(S-6A), 2(S-6B), 3(S-7), (S-8),*CN1503	---
[9]	Fan Holder	D6	3(S-9)	---
[10]	Motor DC Fan	D6	----------	---
[11]	Rear Panel	D6	----------	---
[12]	Power Supply CBA	D7	4(S-10), *CN1504	---
[13]	PCB Holder	D7	4(S-11)	---
[14]	VCR Chassis Unit	D8	5(S-12), (S-13A), (S-13B), (S-13C), 3(S-14), (S-15), (S-16), PCB Washer	---
[15]	Deck Assembly	D9	(S-17), (S-18), Desolder	2 3
[16]	Power SW CBA	D9	Desolder	---
[17]	Function CBA	D9	Desolder	---
[18]	Rear Jack CBA	D9	Desolder, 21P Earth Plate	---
[19]	Main CBA (with AFV CBA)	D9	----------	---
[20]	Deck Pedestal	D10	7(S-19)	---
[21]	Front Bracket R	D10	(S-20)	---
		↓ (1)	↓ (2)	↓ (3) ↓ (4) ↓ (5)

Note:

(1): Identification (location) No. of parts in the figures

(2): Name of the part

(3): Figure Number for reference

(4): Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P=Spring, L=Locking Tab, S=Screw, CN=Connector
*=Unhook, Unlock, Release, Unplug, or Desolder
e.g. 6(S-1) = six Screws (S-1),
5(L-1) = five Locking Tabs (L-1)

(5): Refer to “Reference Notes.”

Reference Notes

CAUTION 1: Locking Tabs (L-1) and (L-2) are fragile. Be careful not to break them.

1-1. Release five Locking Tabs (L-1).

1-2. Release three Locking Tabs (L-2).

1-3. Disconnect Connector (CN1505), and remove the Front Assembly.

2. When reassembling, solder wire jumpers as shown in Fig. D9.

3. Before installing the Deck Assembly, be sure to place the pin of LD-SW on Main CBA as shown in Fig. D9. Then, install the Deck Assembly while aligning the hole of Cam Gear with the pin of LD-SW, the shaft of Cam Gear with the hole of LD-SW as shown in Fig. D9.

4. The DVD Mechanism & DVD Main CBA Assembly is adjusted as a unit at factory. Therefore, do not disassemble it.
Replace the DVD Mechanism & DVD Main CBA Assembly as a unit.

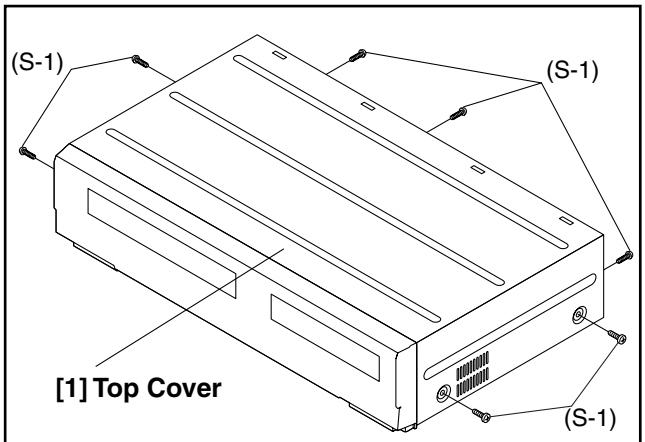


Fig. D1

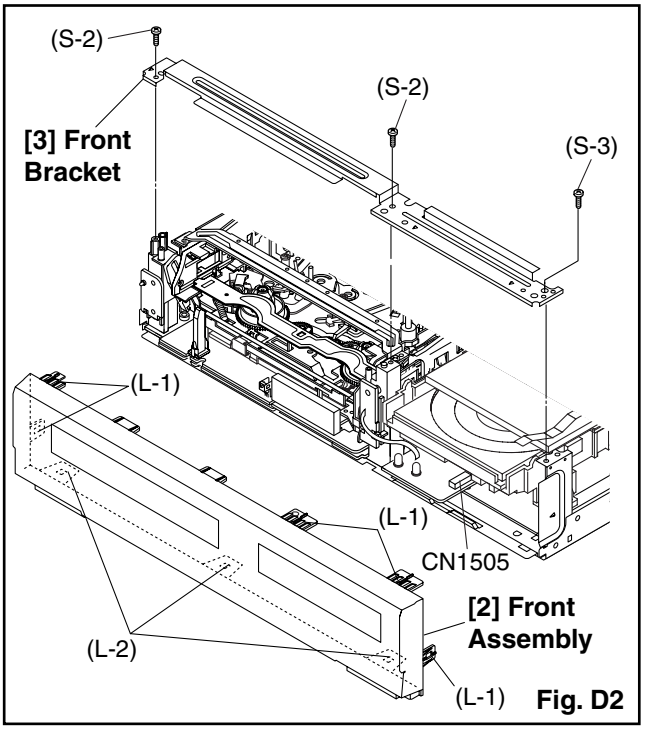


Fig. D2

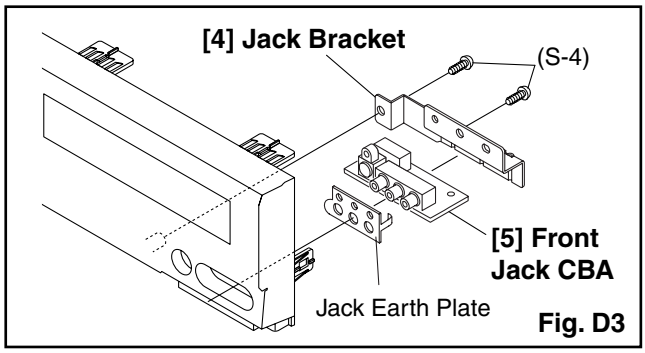
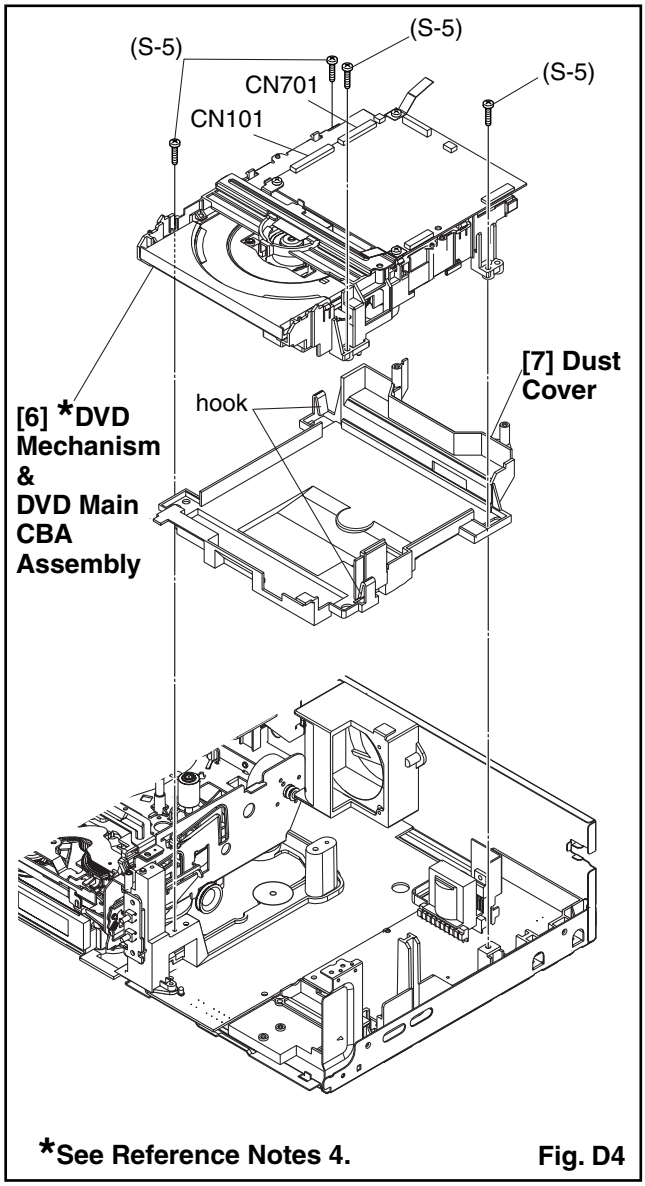


Fig. D3



*See Reference Notes 4.

Fig. D4

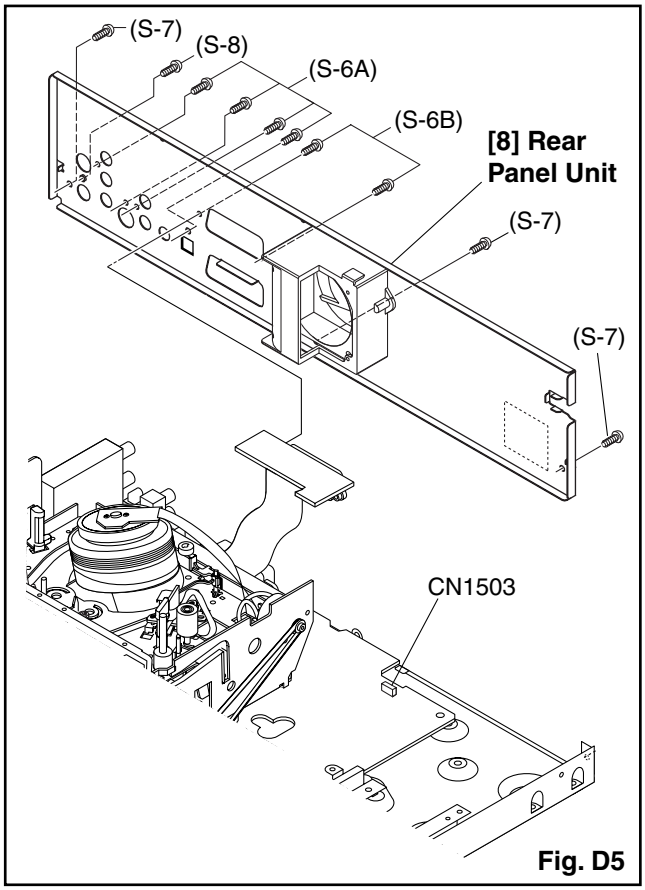


Fig. D5

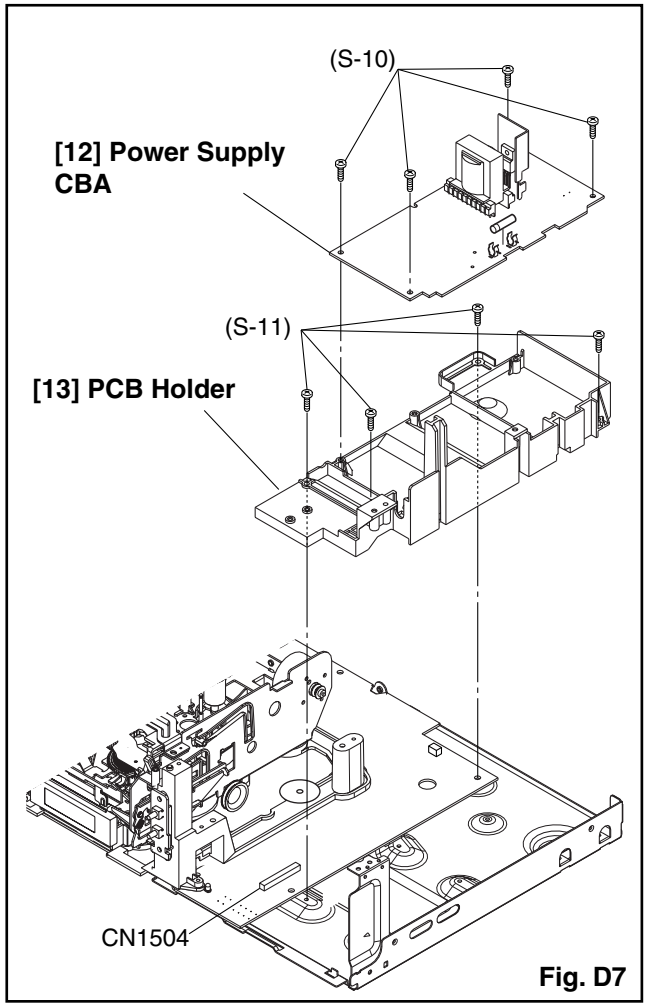


Fig. D7

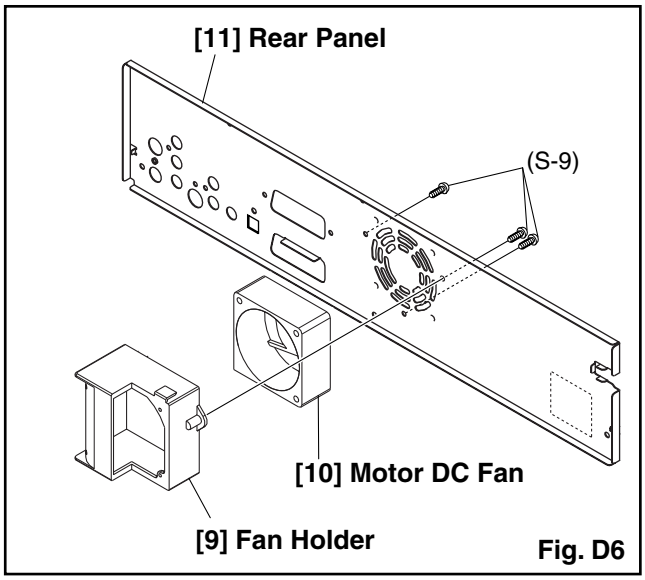


Fig. D6

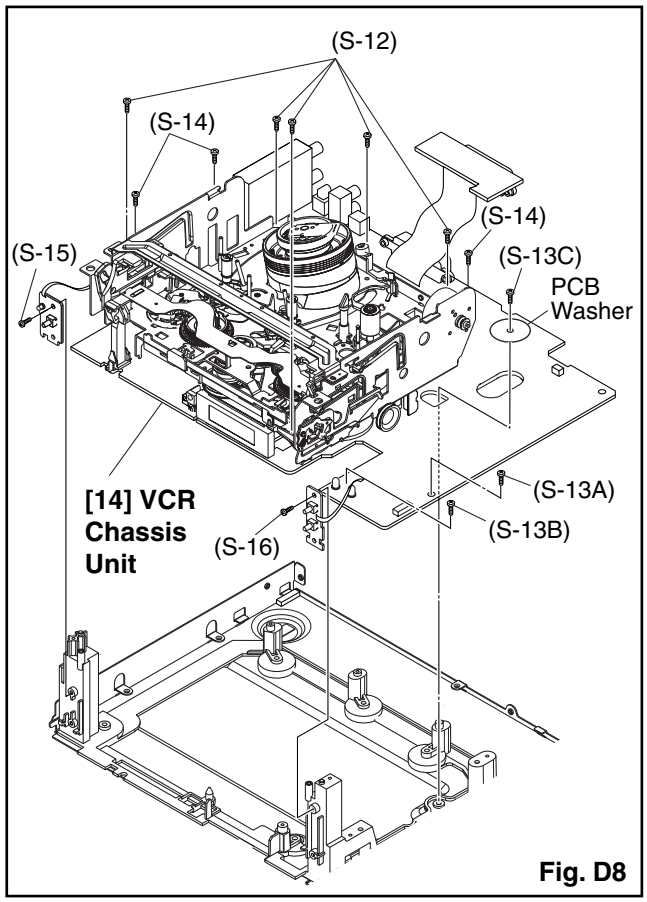
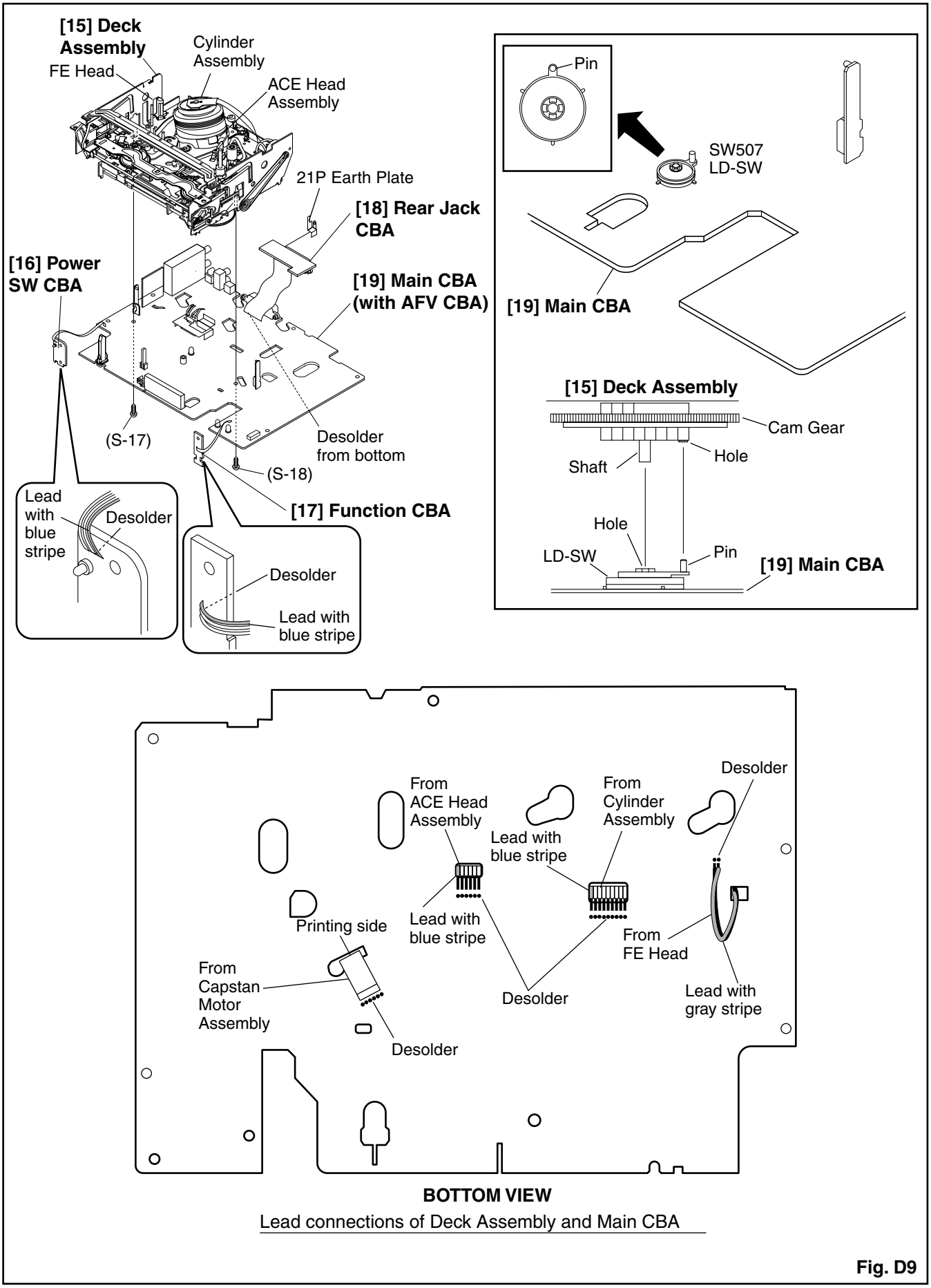


Fig. D8



BOTTOM VIEW

Lead connections of Deck Assembly and Main CBA

Fig. D9

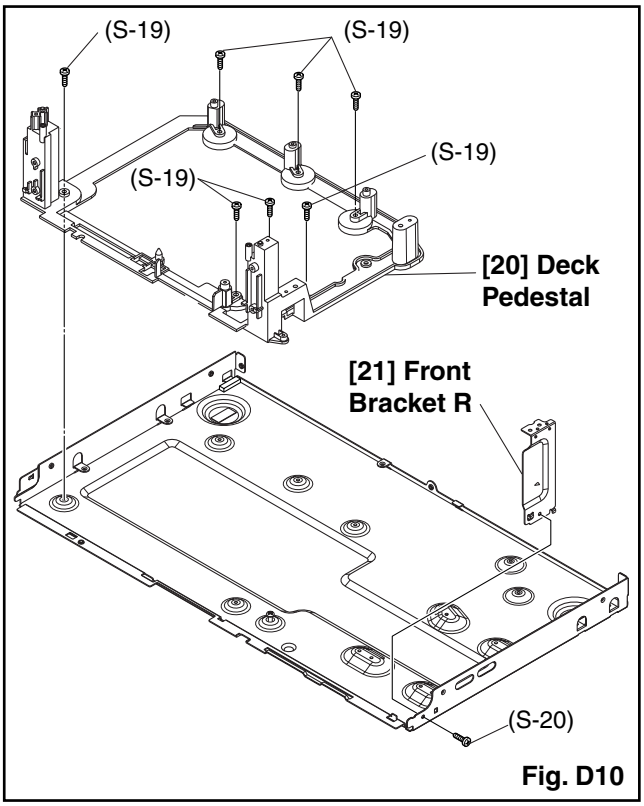
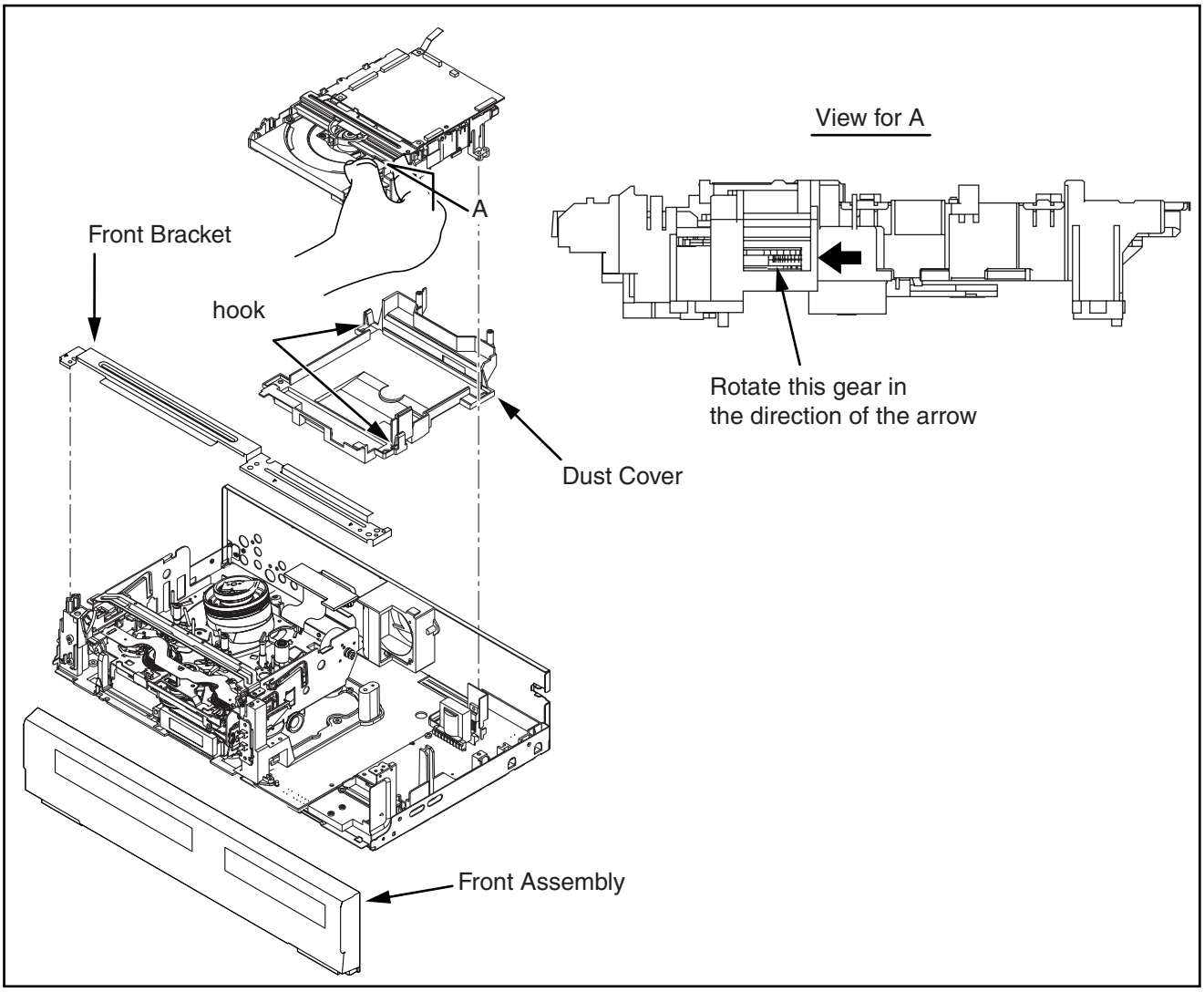


Fig. D10

3. How to Eject Manually

Note: When rotating the gear, be careful not to damage the gear.

1. Remove the Top Cover.
2. Remove the Front Assembly.
3. Remove the Front Bracket.
4. Remove the DVD Mechanism & DVD Main CBA Assembly.
5. Unhook two places and detach the Dust Cover.
6. Rotate the gear in the direction of the arrow manually as shown below until the tray descends.
7. Pull the tray out manually and remove a disc.



ELECTRICAL ADJUSTMENT INSTRUCTIONS

NOTE:

1. Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to do these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.
2. To perform these alignment / confirmation procedures, make sure that the tracking control is set in the center position: Press either [PROG. ▼] or [PROG. ▲] button on the front panel first, then the [PLAY] (VCR) button on the front panel.

Test Equipment Required

1. Oscilloscope: Dual-trace with 10:1 probe,
   V-Range: 0.001~50V/Div.,
   F-Range: DC~AC-20MHz
2. Alignment Tape (FL6A)

Head Switching Position Adjustment

Purpose:

To determine the Head Switching position during playback.

Symptom of Misadjustment:

May cause Head Switching noise or vertical jitter in the picture.

Test point	Adj.Point	Mode	Input
J236(JK1-V-OUT) TP504(RF-SW) GND	VR501 (Switching Point) (MAIN CBA)	PLAY (SP)	-----
Tape	**Measurement Equipment**	**Spec.**	
FL6A	Oscilloscope	6.5H±1H (416μs±64μs)	

Connections of Measurement Equipment

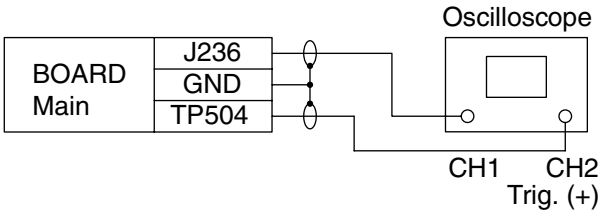
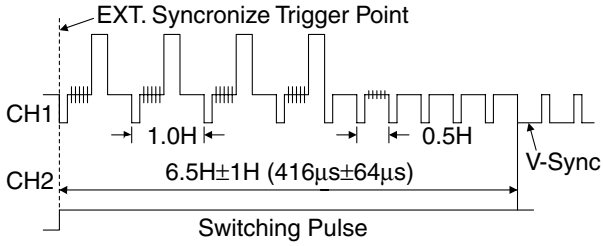


Figure 1



Reference Notes:

Playback the Alignment tape and adjust VR501 so that the V-sync front edge of the CH1 video output waveform is at the 6.5H±1H (416μs±64μs) delayed position from the rising edge of the CH2 head switching pulse waveform.

HOW TO INITIALIZE THE DVD RECORDER & VCR

To put the program back at the factory-default, initialize the DVD recorder & VCR as the following procedure.

< DVD Section >

1. Turn the DVD recorder on.
2. Confirm that no disc is loaded or that the disc tray is open. To put the DVD recorder into the Version display mode, press [DVD], [CM SKIP], [1], [2], and [3] buttons on the remote control unit in that order.
   Fig. a appears on the screen.

*1: "*******" differs depending on the models.
*2: Firmware Version differs depending on the models, and this indication is one example.

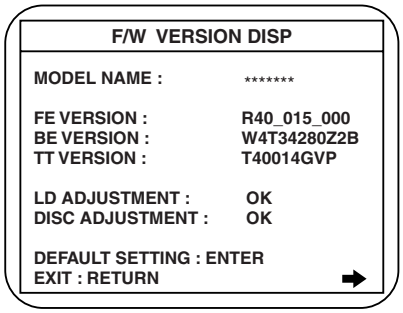


Fig. a Version Display Mode Screen

3. Press [ENTER] button, then the DVD recorder starts initializing. When the initializing is completed, the DVD recorder exits the Version display mode and turns off the power automatically.
   * To move into the Normal mode from the Version display mode, press [RETURN] button on the remote control unit instead of [ENTER] button.
   * When [STANDBY-ON] button is pressed before [ENTER] button is pressed, the DVD recorder exits the Version display mode, then the power turns off.

FIRMWARE RENEWAL MODE

1. Turn the power on and remove the disc on the tray.
2. To put the DVD recorder into version up mode, press [CM SKIP], [6], [5], and [4] buttons on the remote control unit in the order. Then the tray will open automatically.
   Fig. a appears on the screen and Fig. b appears on the VFD.

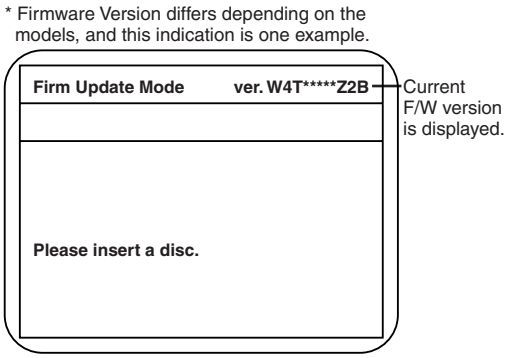

* Firmware Version differs depending on the models, and this indication is one example.
Firm Update Mode
ver. W4T*****Z2B
Current F/W version is displayed.
Please insert a disc.

Fig. a Version Up Mode Screen

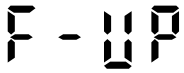


Fig. b VFD in Version Up Mode

3. Load the disc for version up.
   Fig. c appears on the screen. The file on the top is highlighted as the default.
   When there is only one file to exist, Step 4 will start automatically.

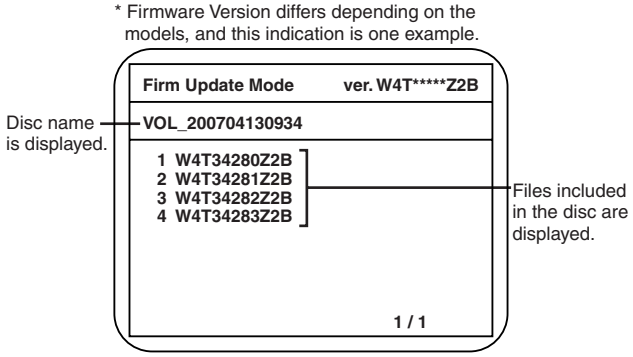


Fig. c Update Disc Screen

4. Select the firmware version pressing arrow buttons, then press [ENTER].
   Fig. d appears on the screen and Fig. e appears on the VFD. The DVD recorder starts updating.

   About VFD indication of Fig. e:

   1) When Fig. d is displayed on the screen, “F-UP” is displayed on the VFD.
   2) When “Firmware Updating... XX% Complete.” is displayed on the screen, “34280” is displayed on the VFD.

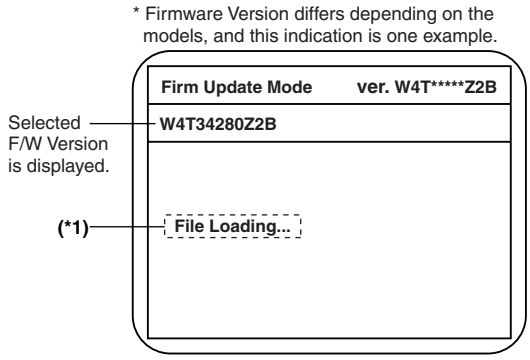

* Firmware Version differs depending on the models, and this indication is one example.
Firm Update Mode
ver. W4T*****Z2B
Selected F/W Version is displayed.
W4T34280Z2B
(*1)
File Loading...

Fig. d Programming Mode Screen

Fig. e VFD in Programming Mode (Example)

The appearance shown in (*1) of Fig. d is described as follows.

No.	Appearance	State
1	File Loading...	Sending files into the memory
2	Firmware Updating... XX% Complete.	Writing new version data
---	Firmware Update Failure	Failed in updating

5. After updating is finished, the tray opens automatically.
   At this time, no button is available.
6. Pull out the AC code once, then insert it again.

FUNCTION INDICATOR SYMBOLS

< VCR Section >

Note:

If a mechanical malfunction occurs, the power is turned off. When the power comes on again after that by pressing [STANDBY-ON] button, an error message is displayed on the TV screen for 5 seconds.

MODE	INDICATOR ACTIVE
When reel or capstan mechanism is not functioning correctly	"⏏ R" is displayed on a TV screen. (Refer to Fig. 1.)
When tape loading mechanism is not functioning correctly	"⏏ T" is displayed on a TV screen. (Refer to Fig. 2.)
When cassette loading mechanism is not functioning correctly	"⏏ C" is displayed on a TV screen. (Refer to Fig. 3.)
When the drum is not working properly	"⏏ D" is displayed on a TV screen. (Refer to Fig. 4.)
P-ON Power safety detection	"⏏ P" is displayed on a TV screen. (Refer to Fig. 5.)

TV screen

When reel or capstan mechanism is not functioning correctly

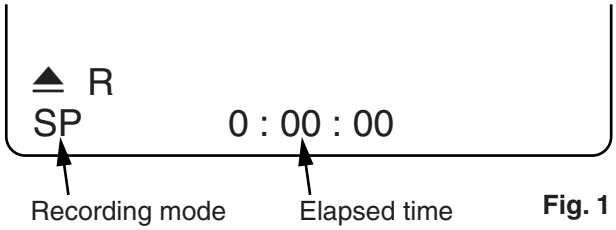


Fig. 1

When tape loading mechanism is not functioning correctly

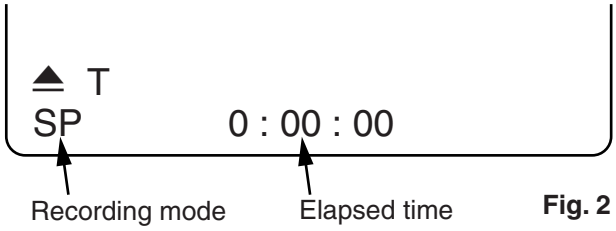


Fig. 2

When cassette loading mechanism is not functioning correctly

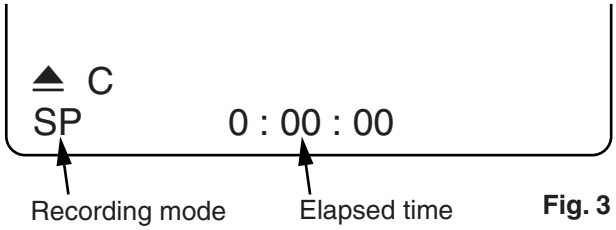


Fig. 3

When the drum is not working properly

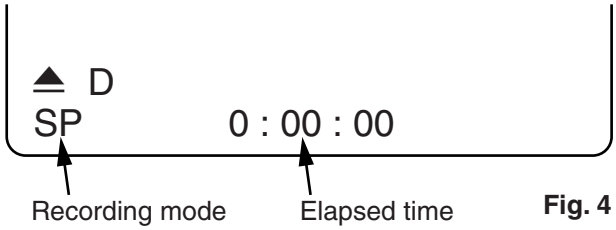


Fig. 4

P-ON Power safety detection

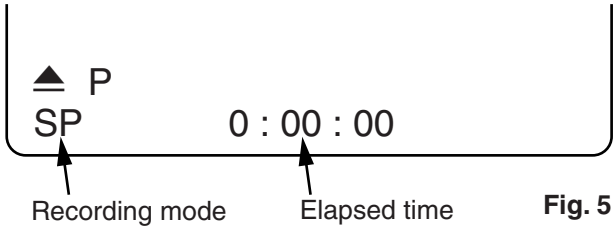
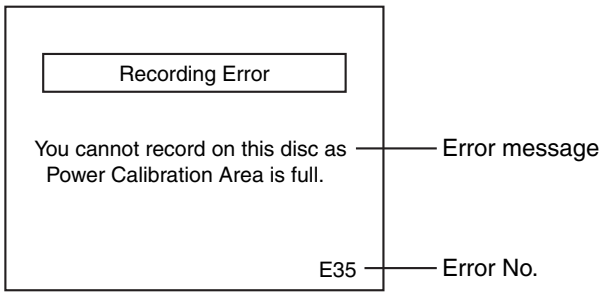


Fig. 5

< DVD Section >

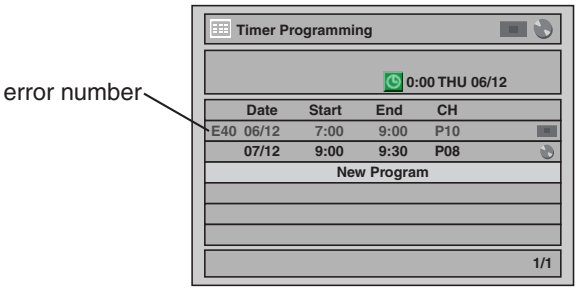
Note: If an error occurs, a message with the error number appears on the screen.



Message	Solution	Error No.	Error Description	Priority
Can not record on this disc.	Insert the recordable disc, and ensure the disc status satisfies the recording requirements.	1	An error occurs during data reading.	-
		2	There is no reply for 15 seconds in Test Unit Ready.	-
		3	Cannot write the data after trying three times.	-
		4	An error occurs with OPC.	-
		5	During recovery in a record.	-
		6	An error occurs even if recovery has been tried three times.	-
		7	An error occurs in a format.	-
		8	It cannot start an encode.	-
		9	NV_PCK/RDI_PCK is not in encoded data.	-
		10	Encode Pause condition continued for 10 minutes.	-
		11	Encode Pause condition continued in normal REC condition for 10 minutes.	-
		12	Difference in the address and can not get Stream ID of RDI/VIDEO.	-
		13	It is a reply that “ATAPI is not readable.”	-
		14	Cannot write the data after recovering SMALL VMGI.	-
		15	Cannot write the data after DVD-R Reverse Track.	-
		16	An error occurs in Finalize Close.	-
		17	An error occurs in Rec Stop Close.	-
		18	An error occurs in PCA Full (DVD_R).	-
		19	Safety Stop occurs during editing.	-
		20	High Speed Disc.	2
		21	The disc is not formatted.	5
		22	Disc Error has occurred.	3
		23	The -R Disc of VR Mode.	6
		24	The disc except DVD-R/RW or finalized DVD-R.	1
This program is not allowed to be recorded.	You cannot record copy prohibited programs.	25	During the Macrovision picture input.	11
		26	During the CGMS picture input.	12
This program is not recordable in Video mode.	Set “DVD-RW Recording Format” to “VR mode”.	27	During the CGMS picture (possible to record once) input. (Video Format Disc)	12
This program is not allowed to be recorded on this disc.	Insert a ver.1.1 CPRM compatible DVD-RW disc.	28	During the CGMS picture (possible to record once) input. (Disc which is not for the correspondence to VR Format CPRM)	12

Message	Solution	Error No.	Error Description	Priority
This disc is protected and not recordable.	Release the disc protect setting in the Disc Setting menu.	29	Disc Protected Disc.	7
Disc is full. (No area for new recording)	Insert the recordable disc with enough recording space.	30	No available recording space.	5
You cannot record more than 99 titles on one disc. (The maximum is 99.)	Delete unnecessary titles.	31	Its recording capacity has been reached. (Video Format Disc)	7
		32	Its recording capacity has been reached. (VR Format Disc)	8
You cannot record more than 999 chapters on one disc. (The maximum is 999.)	Delete unnecessary chapter markers.	33	The 999 chapter has been reached. (VR Format Disc)	9
You cannot record on this disc as Control Information is full.	Delete unnecessary titles.	34	There is not space to record field of control information.	10
You cannot record on the disc as Power Calibration Area is full.	Insert a new disc.	35	PCA is Full. (in REC start)	4
This disc is already finalized.	Release the finalizing for this disc.	36	It is finalized. (Video Format Disc)	6
Can not record on this disc.	Repeat the same operation.	37	Access to Memory Area range outside.	-
		38	Sector Address is wrong.	-
		39	BUP writing error of chapter editing.	-

If an error occurs during the timer recording, one of the following error numbers (40 to 42) or the above error messages (error number: 1 to 39) is displayed on the recording menu after timer recording.
(Once the screen of the program line is exited, the program line for the error will be cleared.)
(No Error Message is displayed for the error No. 40 ~ 42.)

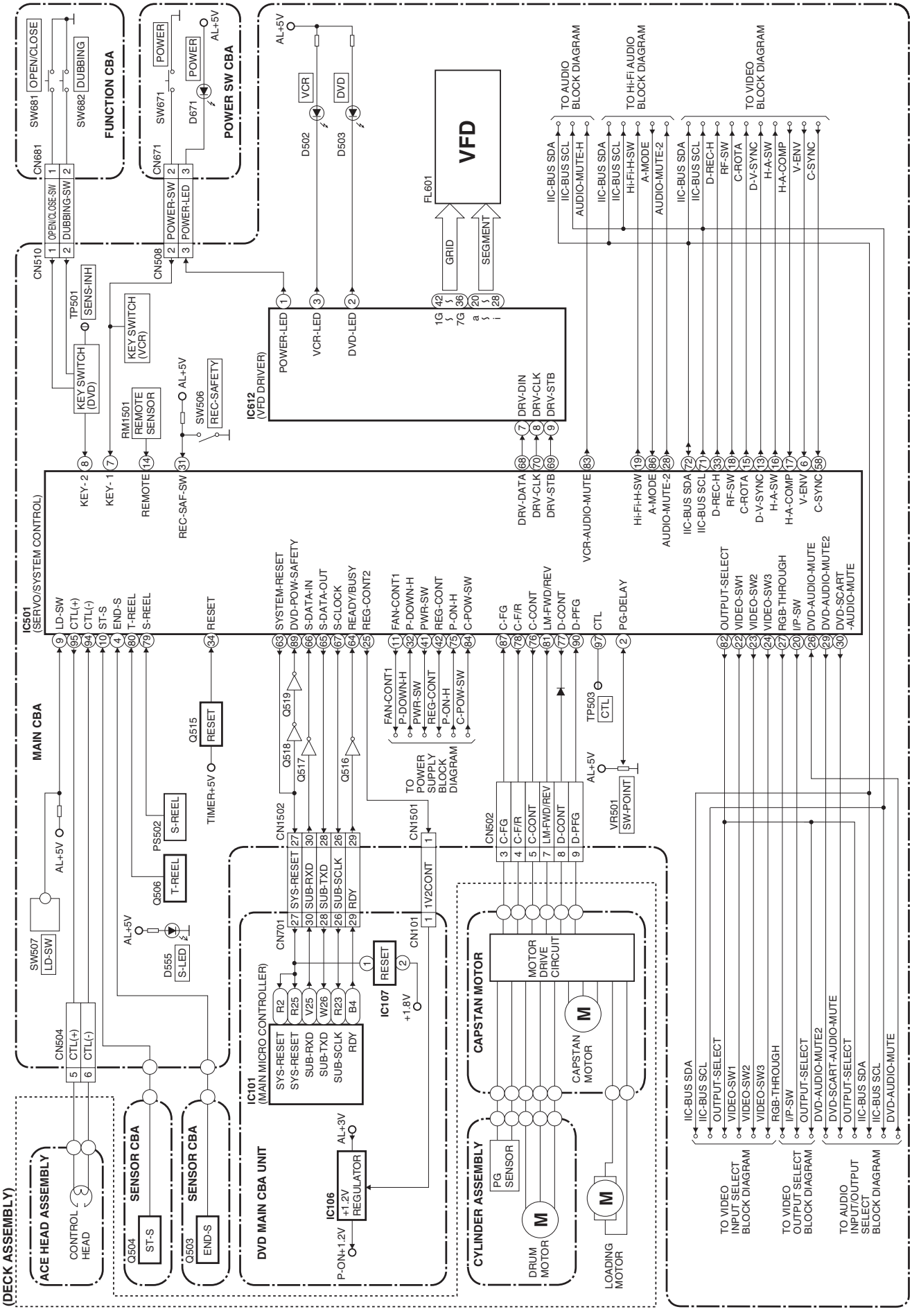


A program with the error number is grayed out and asterisked on the timer programming list.

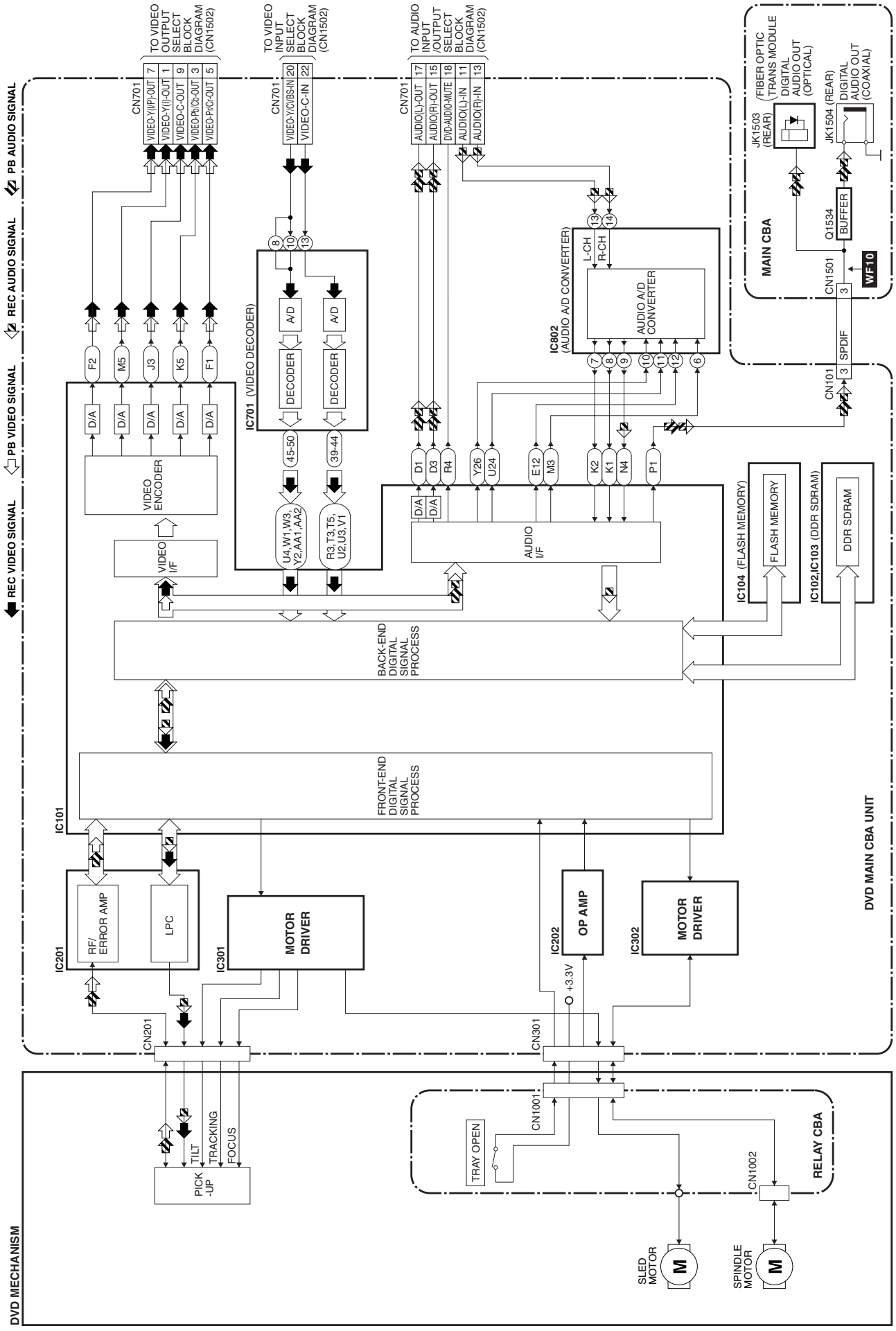
Message	Solution	Error No.	Error Description	Priority
Error message is not displayed.	- Set the timer programming correctly. - Set the timer programming before the start time. - Insert a recordable videotape with a record tab.	40	- Some portion has not been recorded because of program overlapping. - Recording did not start at the start time. - No Videotape is inserted. Videotape ran out during recording.	-
	Turn the power on and set the clock correctly then set timer programming again.	41	Power failed	-
	Insert the recordable disc.	42	No disc when recording	-

BLOCK DIAGRAMS

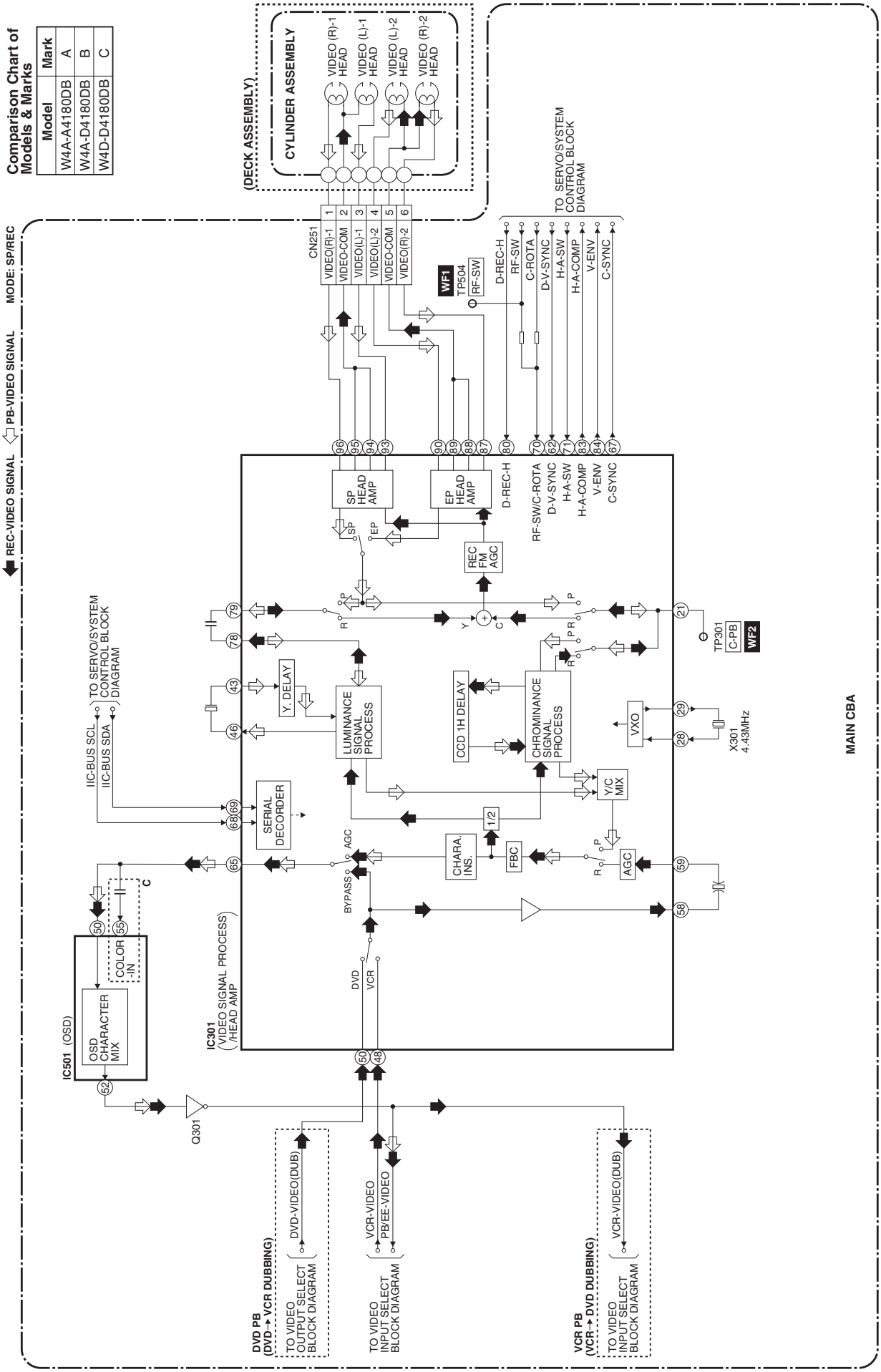
Servo/System Control Block Diagram



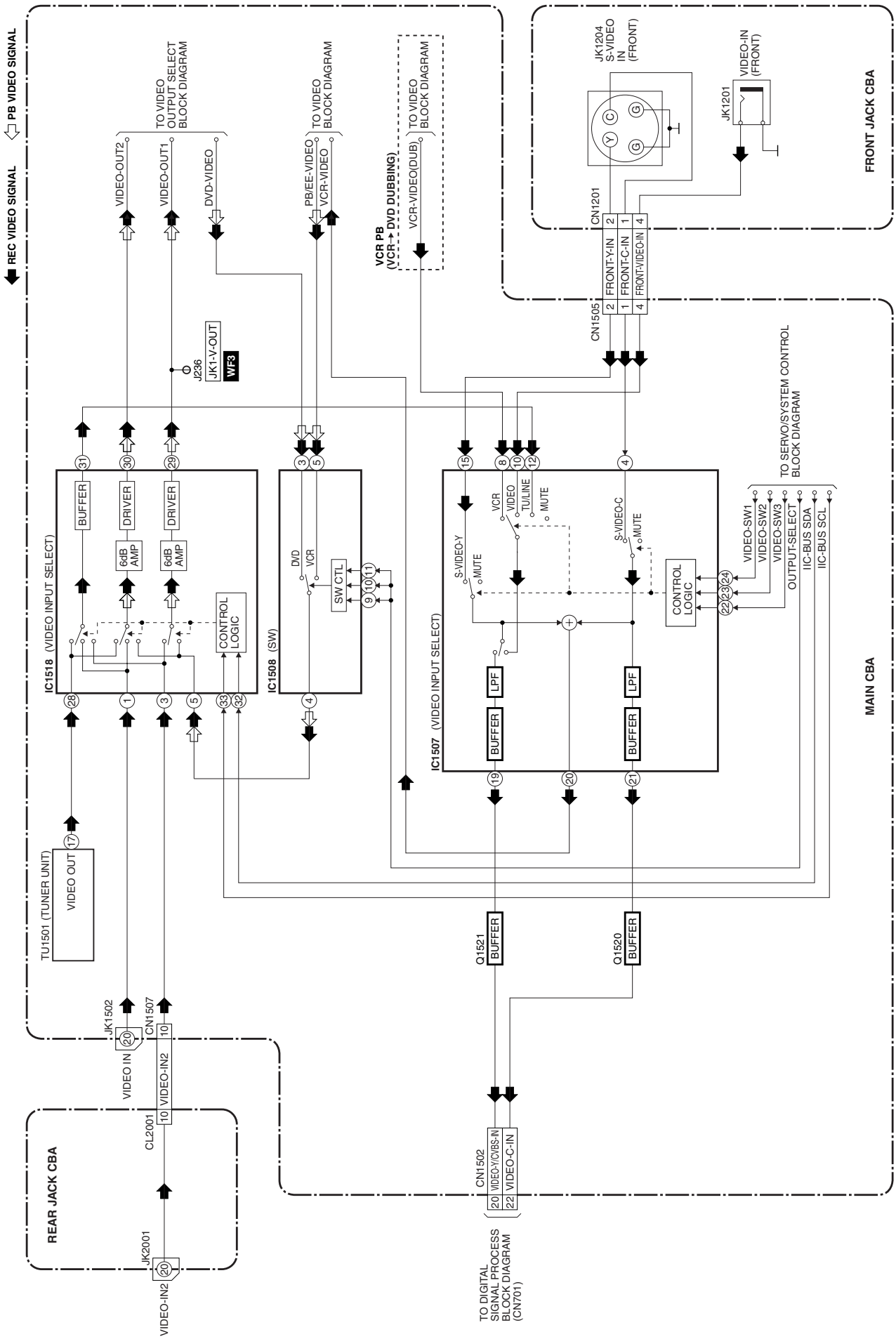
Digital Signal Process Block Diagram



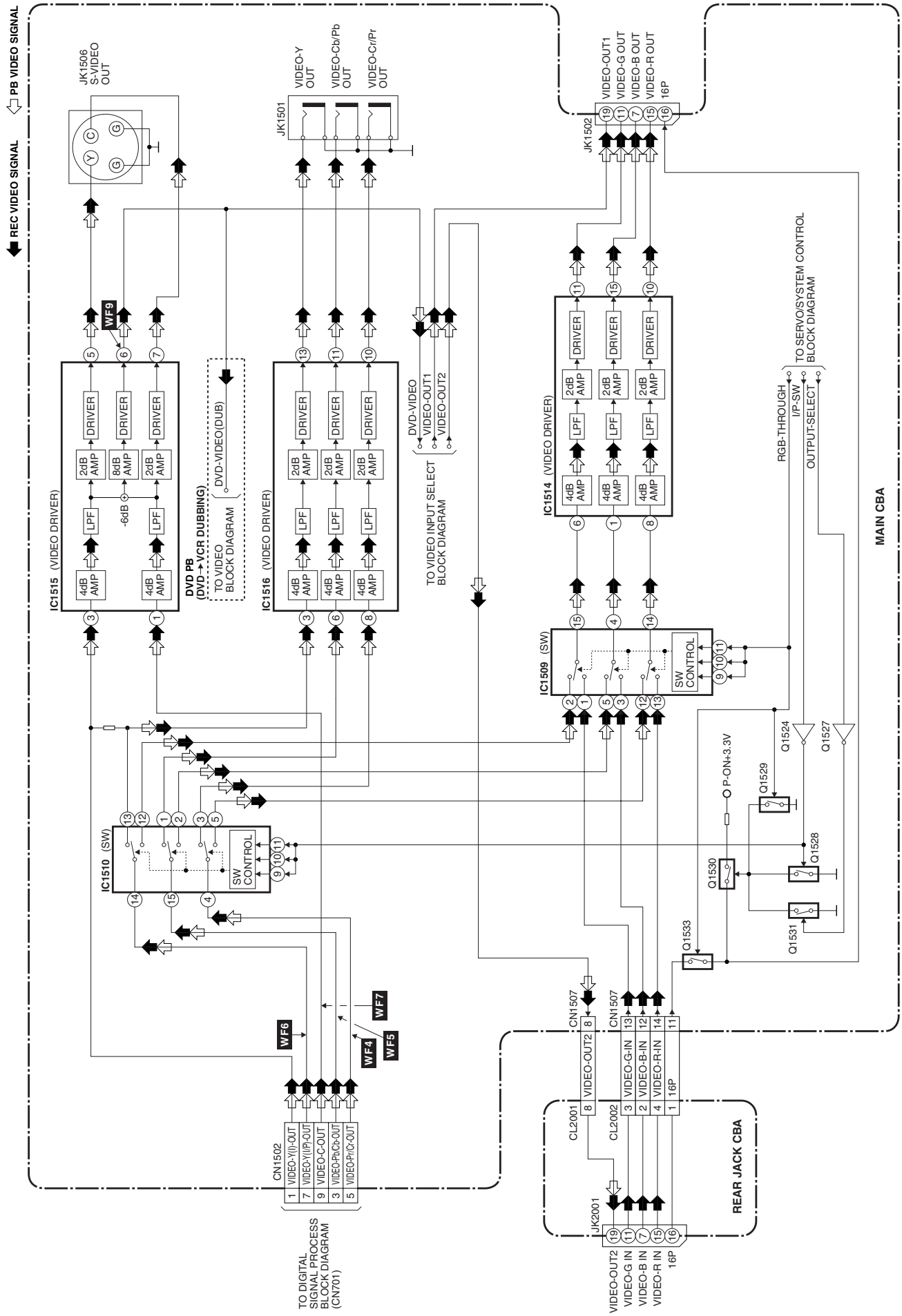
Video Block Diagram



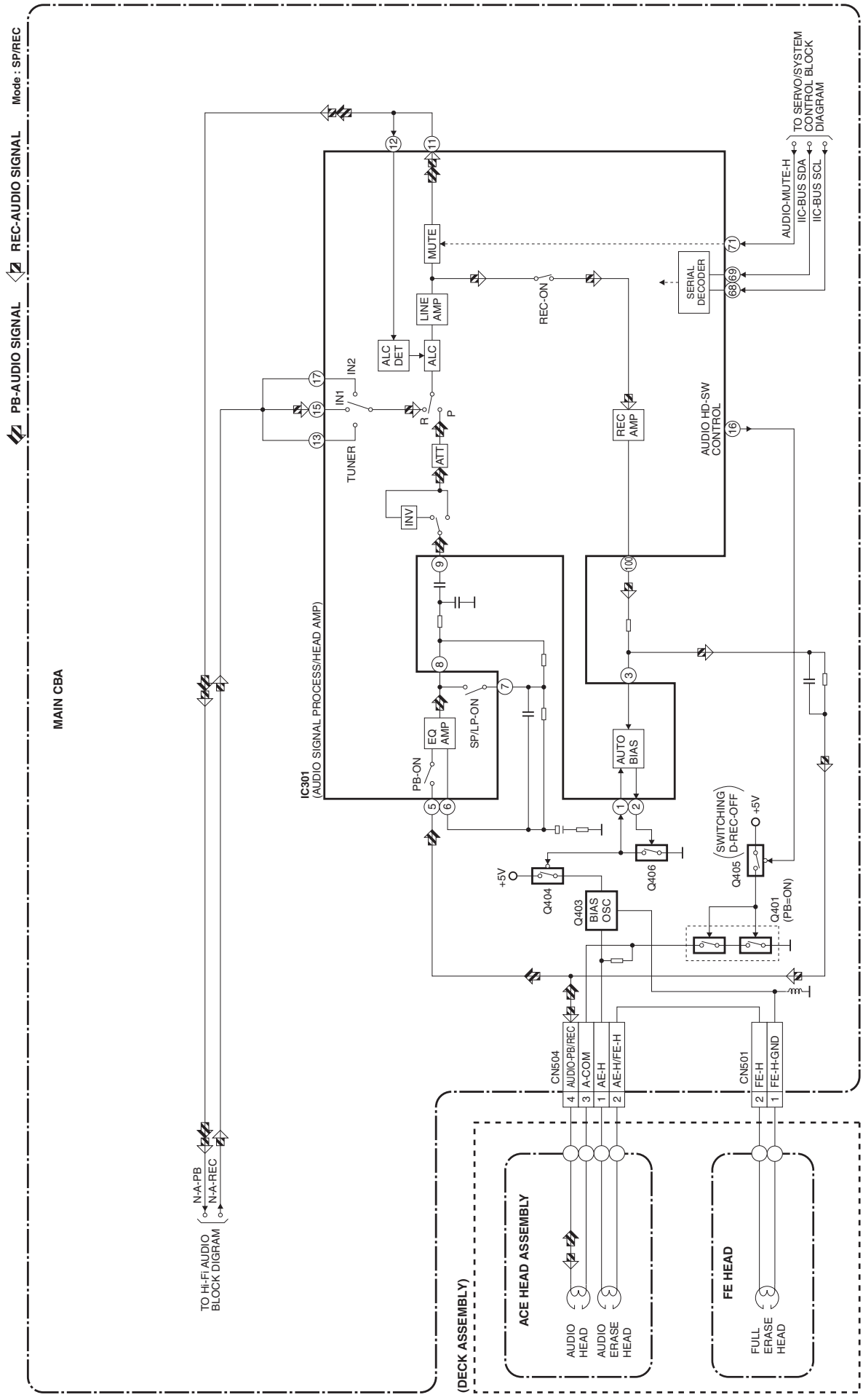
Video Input Select Block Diagram



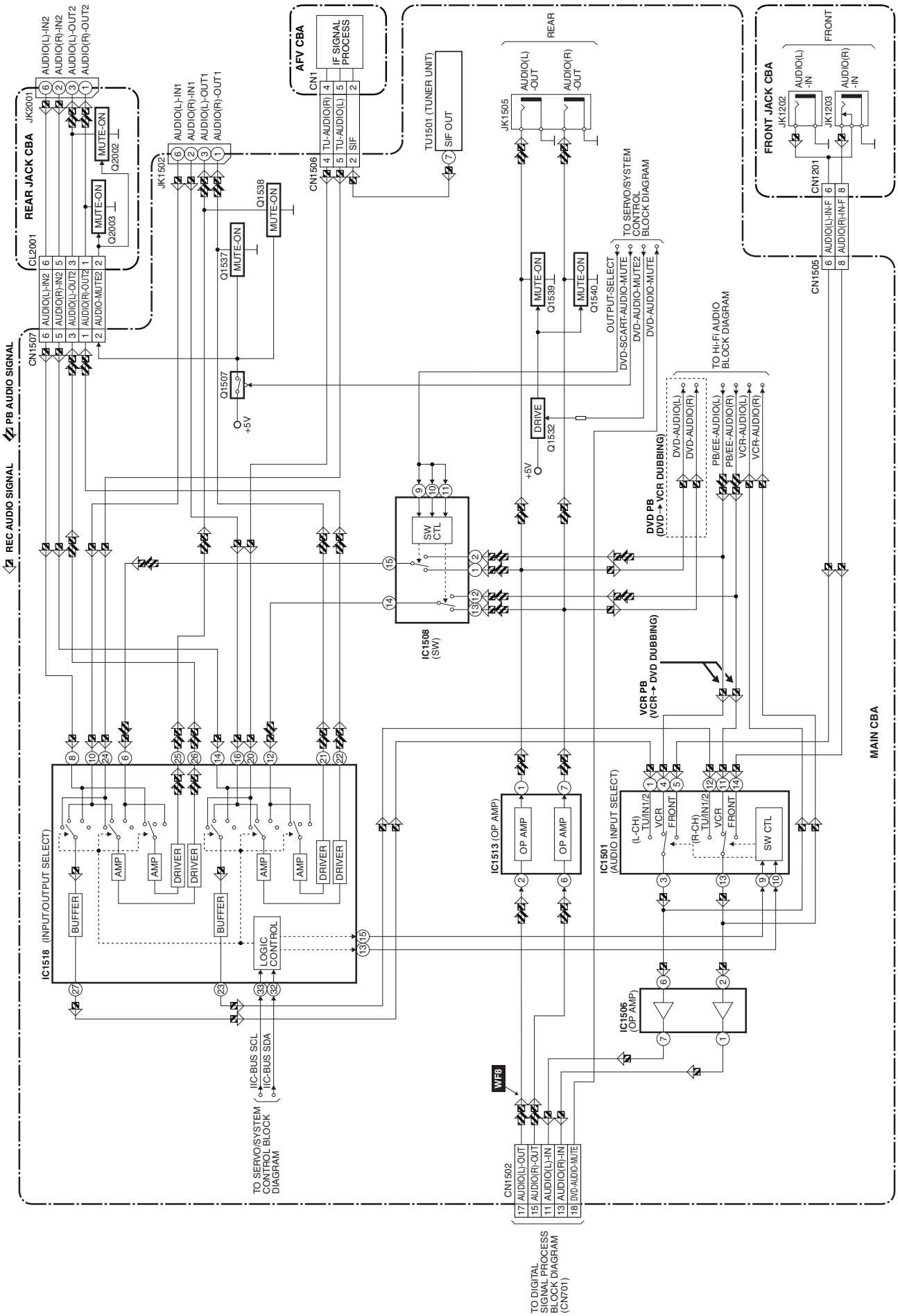
Video Output Select Block Diagram



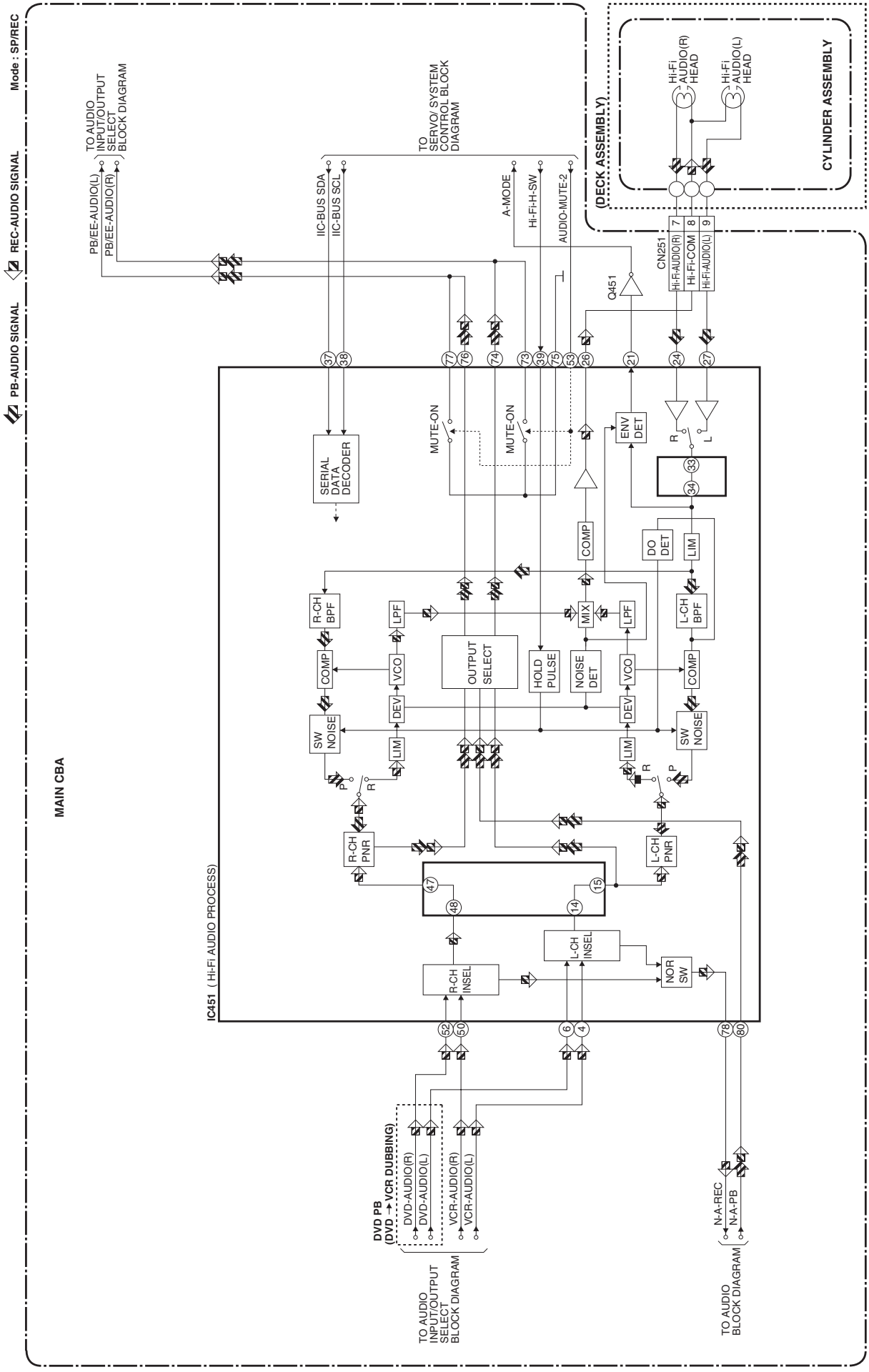
Audio Block Diagram



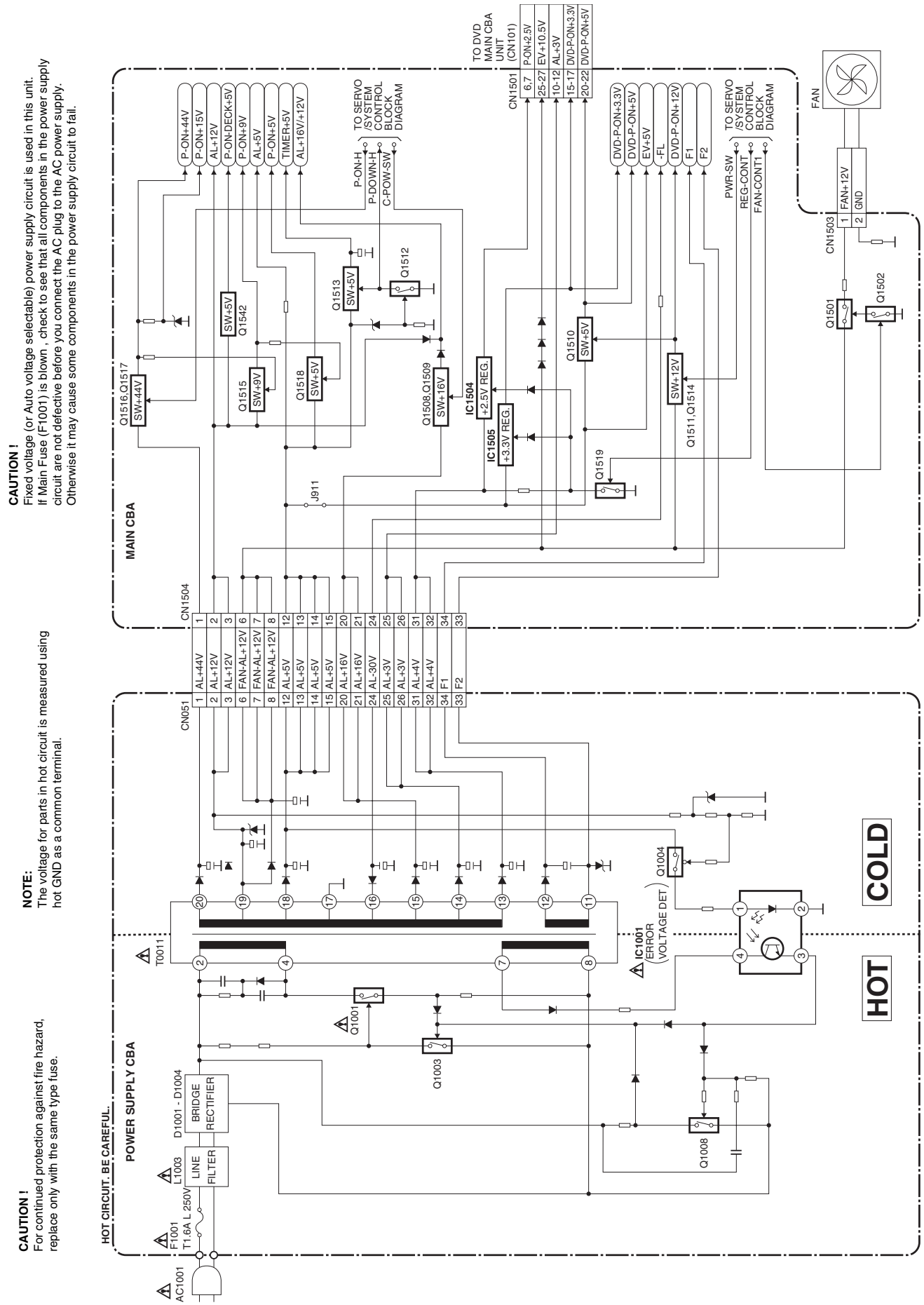
Audio Input/Output Select Block Diagram



Hi-Fi Audio Block Diagram



Power Supply Block Diagram



SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

Standard Notes

WARNING

Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark " ⚠ " in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Notes:

1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms ($K=10^3$, $M=10^6$).
3. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in μF ($P=10^{-6}$ μF).
5. All voltages are DC voltages unless otherwise specified.
6. Electrical parts such as capacitors, connectors, diodes, IC's, transistors, resistors, switches, and fuses are identified by four digits. The first two digits are not shown for each component. In each block of the diagram, there is a note such as shown below to indicate these abbreviated two digits.

LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

1. CAUTION:

FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE.

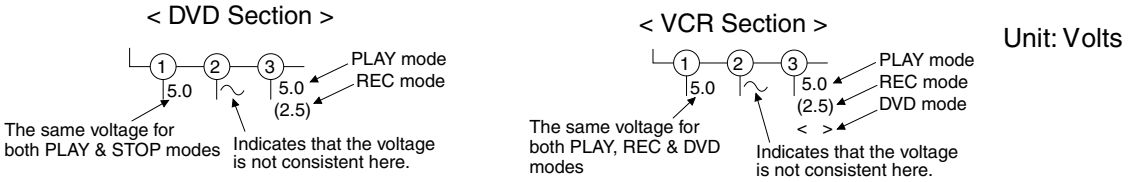
2. CAUTION:

Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

3. Note:

1. Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
2. To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

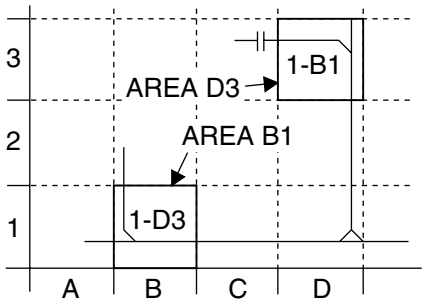
4. Voltage indications for PLAY and REC modes on the schematics are as shown below:



5. How to read converged lines

1-D3
- Distinction Area
- Line Number (1 to 3 digits)

Examples:
1. "1-D3" means that line number "1" goes to the line number "1" of the area "D3".
2. "1-B1" means that line number "1" goes to the line number "1" of the area "B1".



6. Test Point Information

: Indicates a test point with a jumper wire across a hole in the PCB.

: Used to indicate a test point with a component lead on foil side.

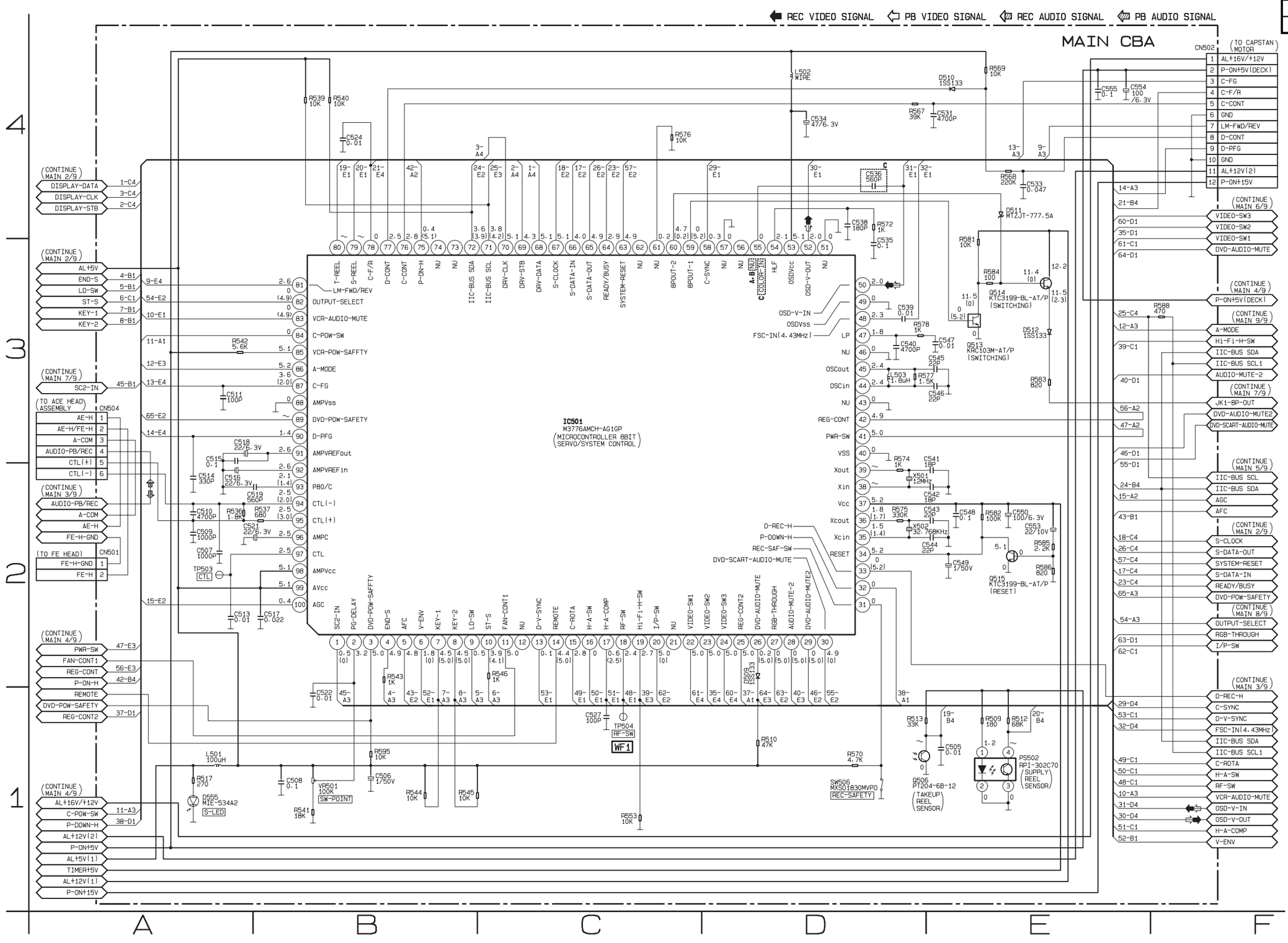
: Used to indicate a test point with no test pin.

: Used to indicate a test point with a test pin.

Main 1/9 Schematic Diagram < VCR Section >

Comparison Chart of Models and Marks

MODEL	MARK
W4A-A4180DB	A
W4A-D4180DB	B
W4D-D4180DB	C



Main 2/9, Power SW, Function & Sensor Schematic Diagram < VCR Section >

FL601 MATRIX CHART

	7G	6G	5G	4G	3G	2G	1G
a	▶	a	a	a	a	a	XP
b	▮	b	b	b	b	b	SP
c	◷	c	c	c	c	c	LP
d	∞	d	d	d	d	d	EP
e	REC	e	e	e	e	e	SLP
f	PM	f	f	f	f	f	SEP
g	g	g	g	g	g	g	P.SCAN
h	h	:	T	:	→	C	W
i	REPEAT	CD	VCD	VCR	←	DVD	R

MAIN CBA

(CONTINUE MAIN 1/9): S-CLOCK, S-DATA-OUT, SYSTEM-RESET, S-DATA-IN, READY/BUSY, DVD-POW-SAFETY

FL601 7-BT-310N (VFD)

IC612 PT6315(L) (VFD DRIVER)

(CONTINUE MAIN 4/9): F1, F2, -FL, EV+5V

(CONTINUE MAIN 1/9): DISPLAY-DATA, DISPLAY-CLK, DISPLAY-STB

(CONTINUE MAIN 6/9): SUB-TXD, SUB-RXD, SUB-SCLK, SYS-RESET, RDY

(CONTINUE MAIN 4/9): AL+5V(1)

(CONTINUE MAIN 1/9): AL+5V, END-S, LD-SW, ST-S, KEY-1, KEY-2

SENSOR CBA

FUNCTION CBA

POWER SW CBA

DVD

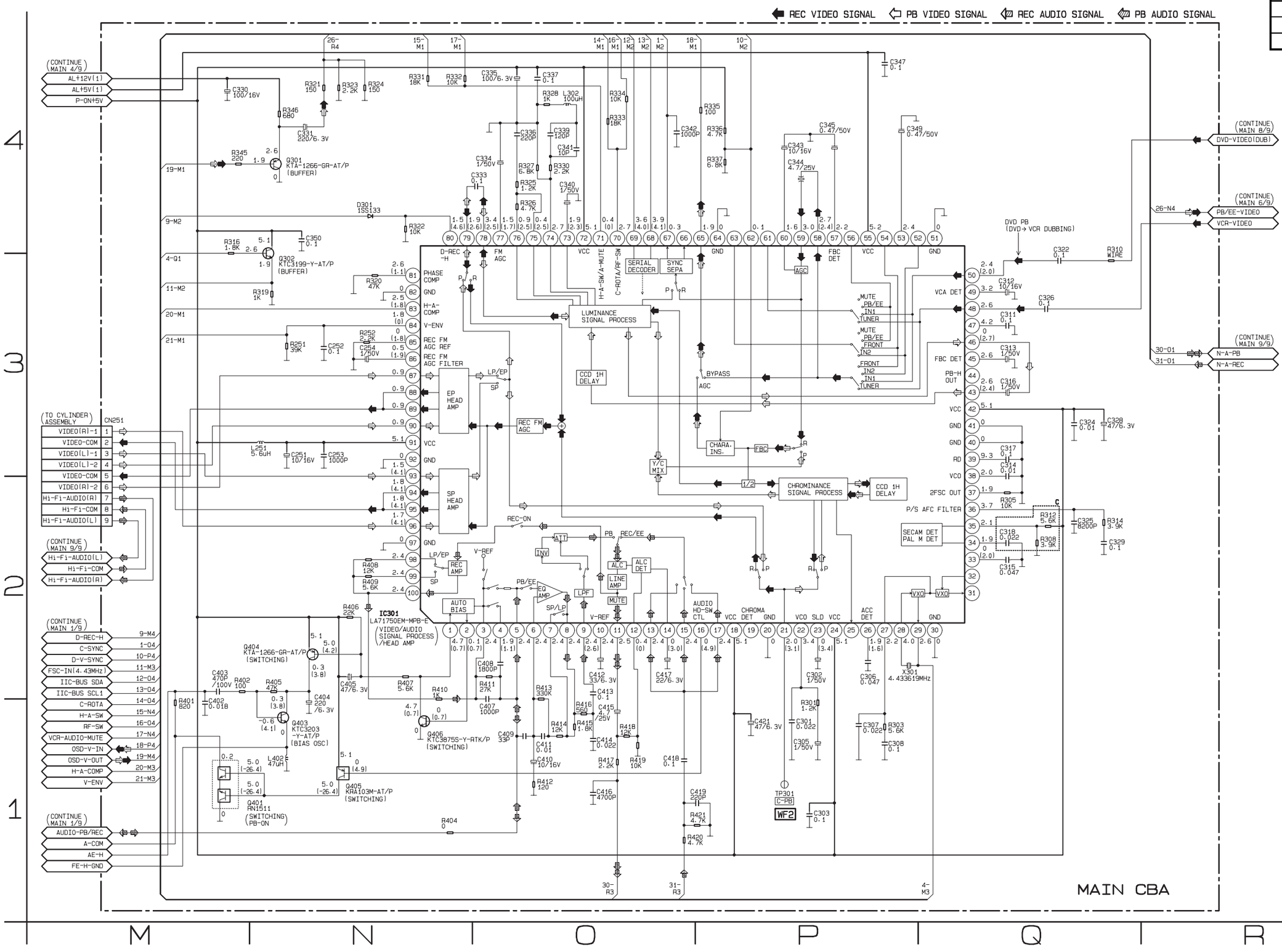
VCR

UNLESS OTHERWISE SPECIFIED: SWITCHES ARE SKQSAF001A.

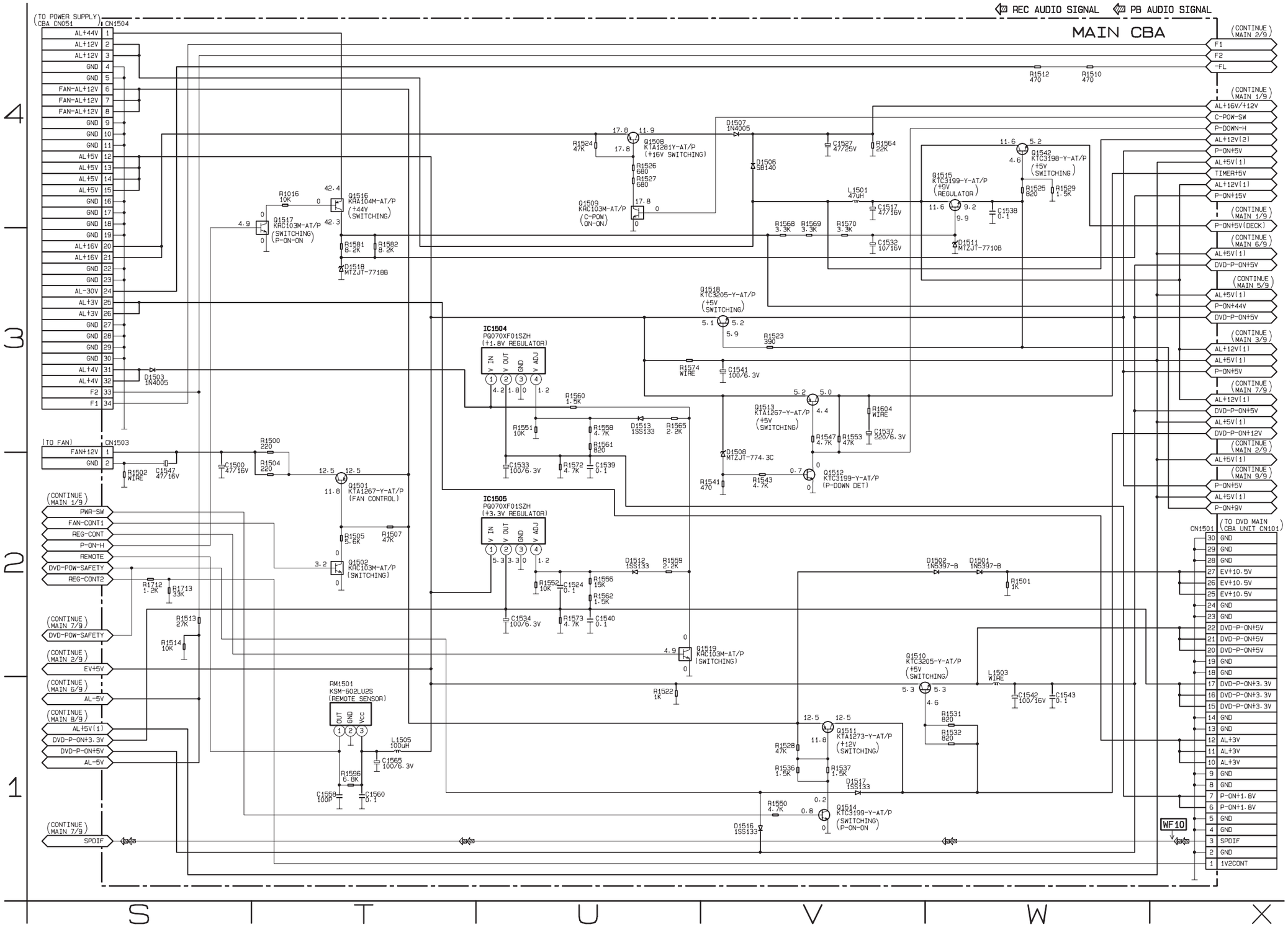
Main 3/9 Schematic Diagram < VCR Section >

Comparison Chart of Models and Marks

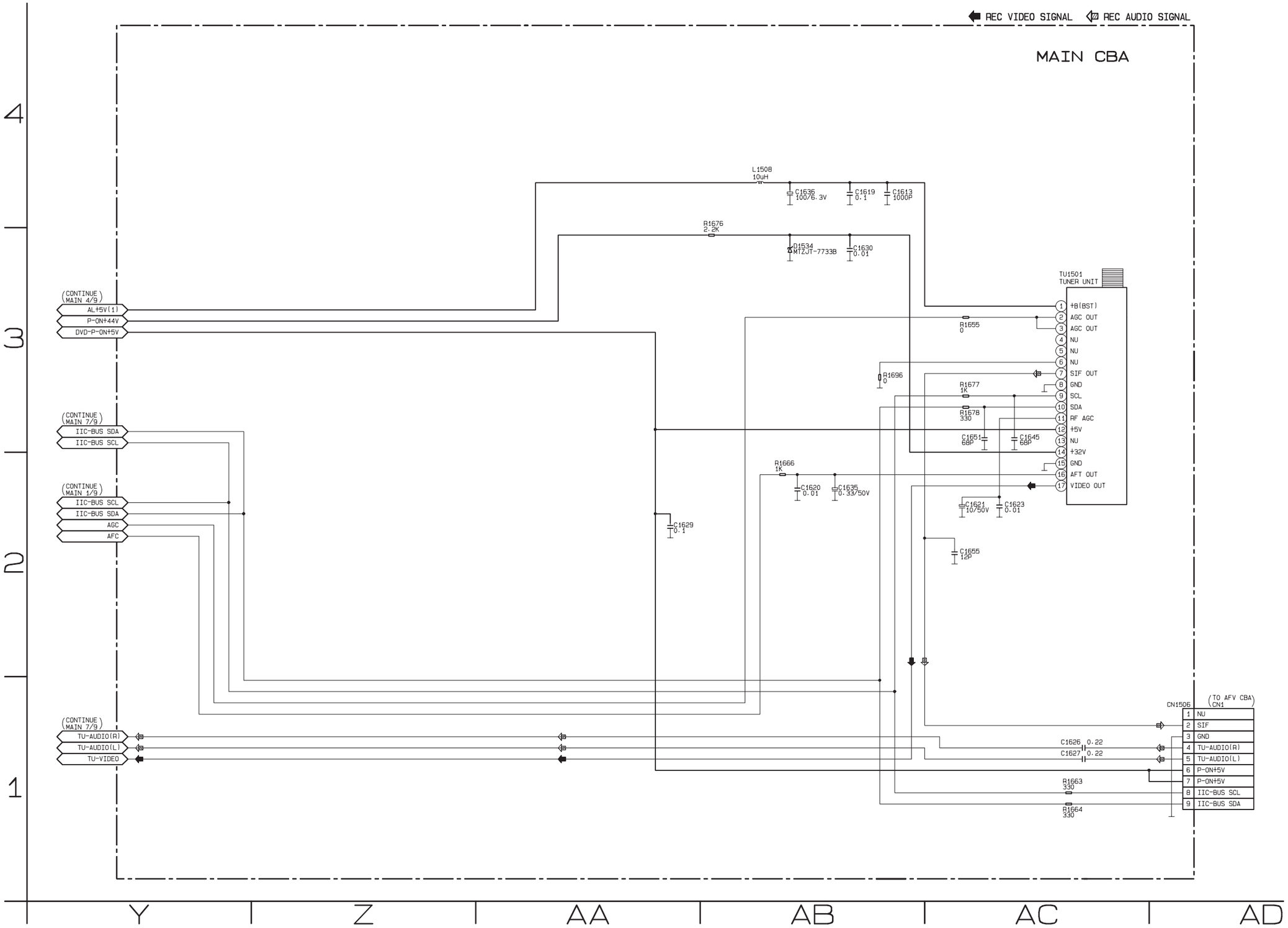
MODEL	MARK
W4A-A4180DB	A
W4A-D4180DB	B
W4D-D4180DB	C



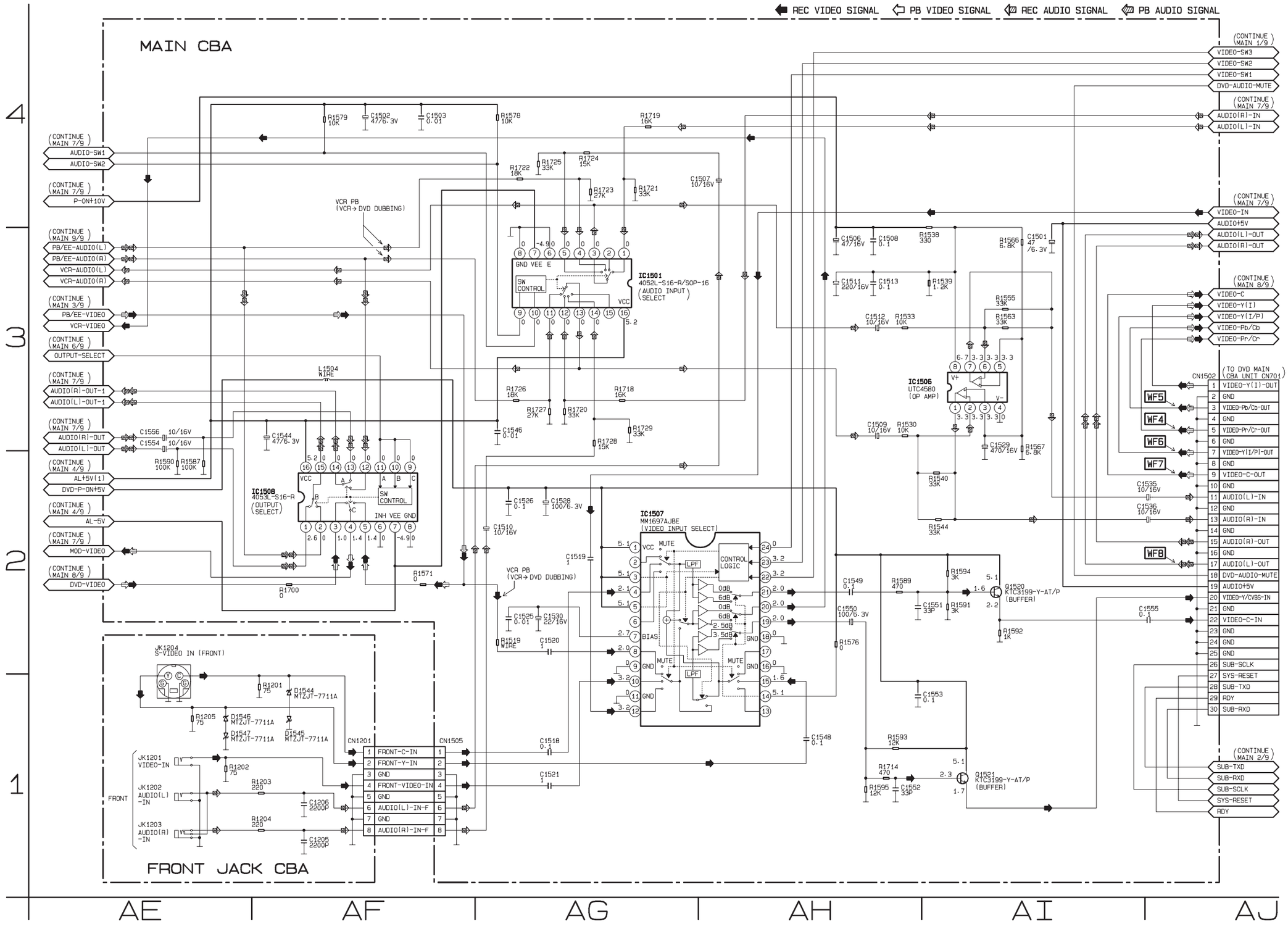
Main 4/9 Schematic Diagram < VCR Section >



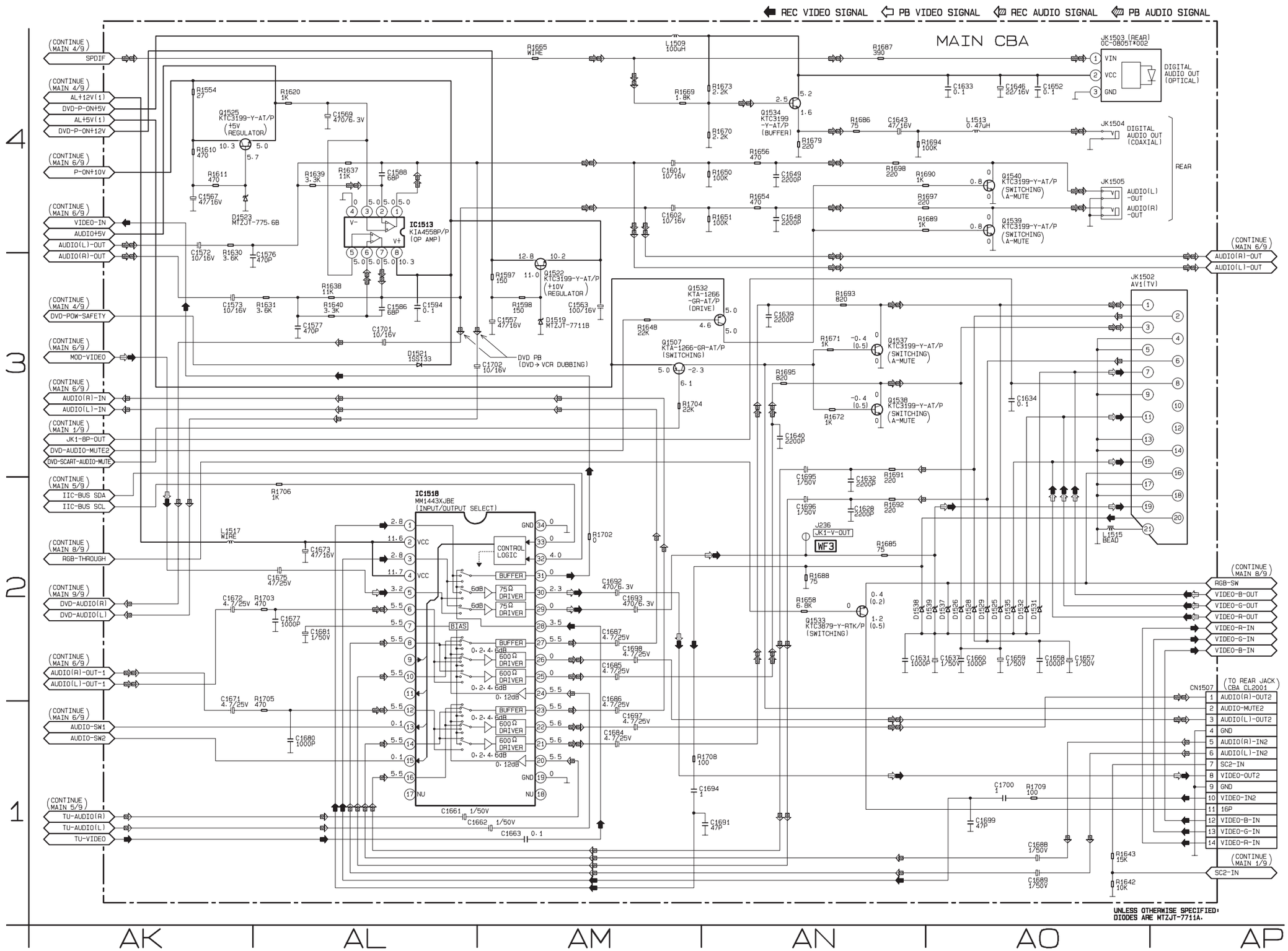
Main 5/9 Schematic Diagram < VCR Section >



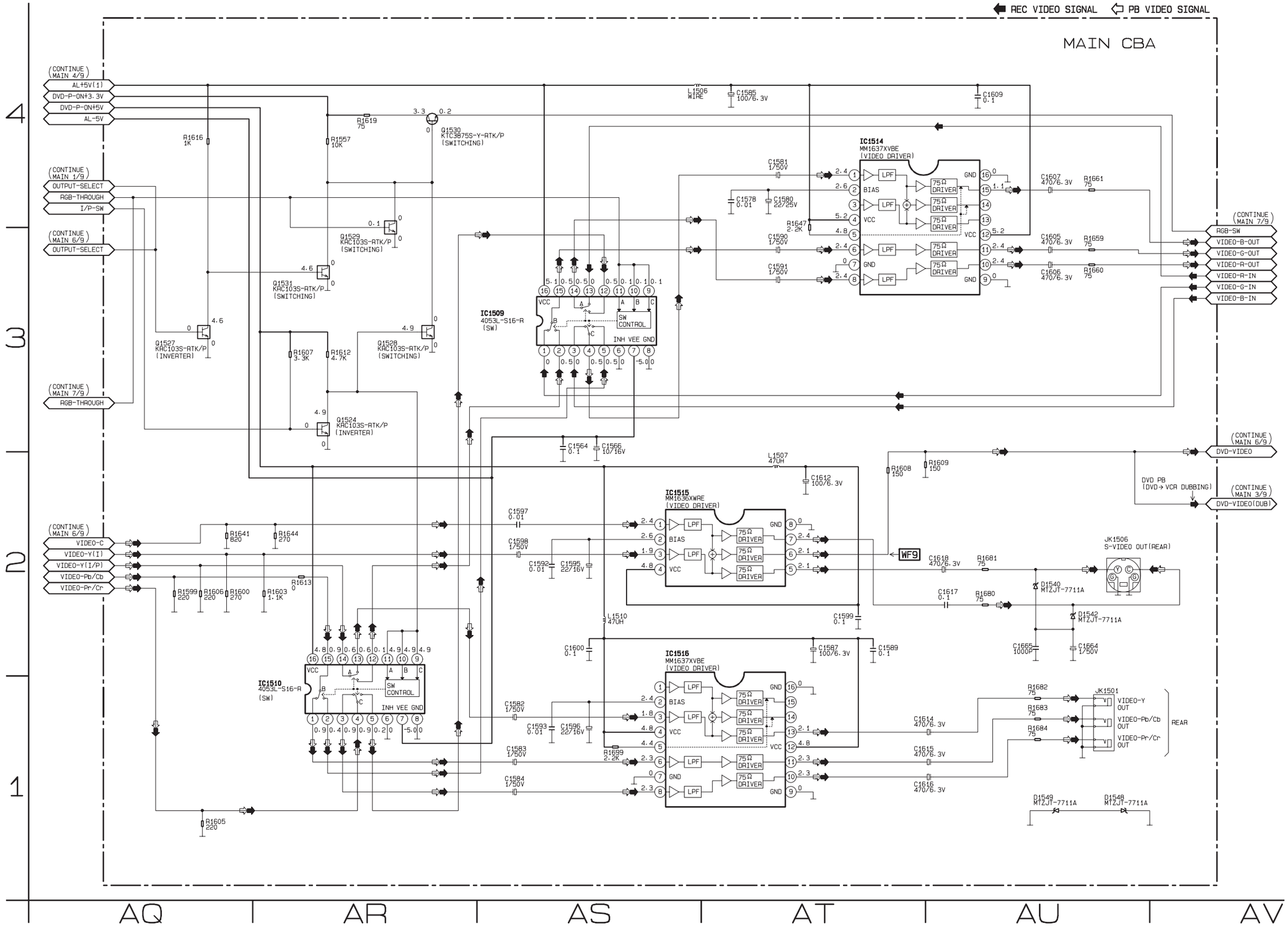
Main 6/9 & Front Jack Schematic Diagram < VCR Section >



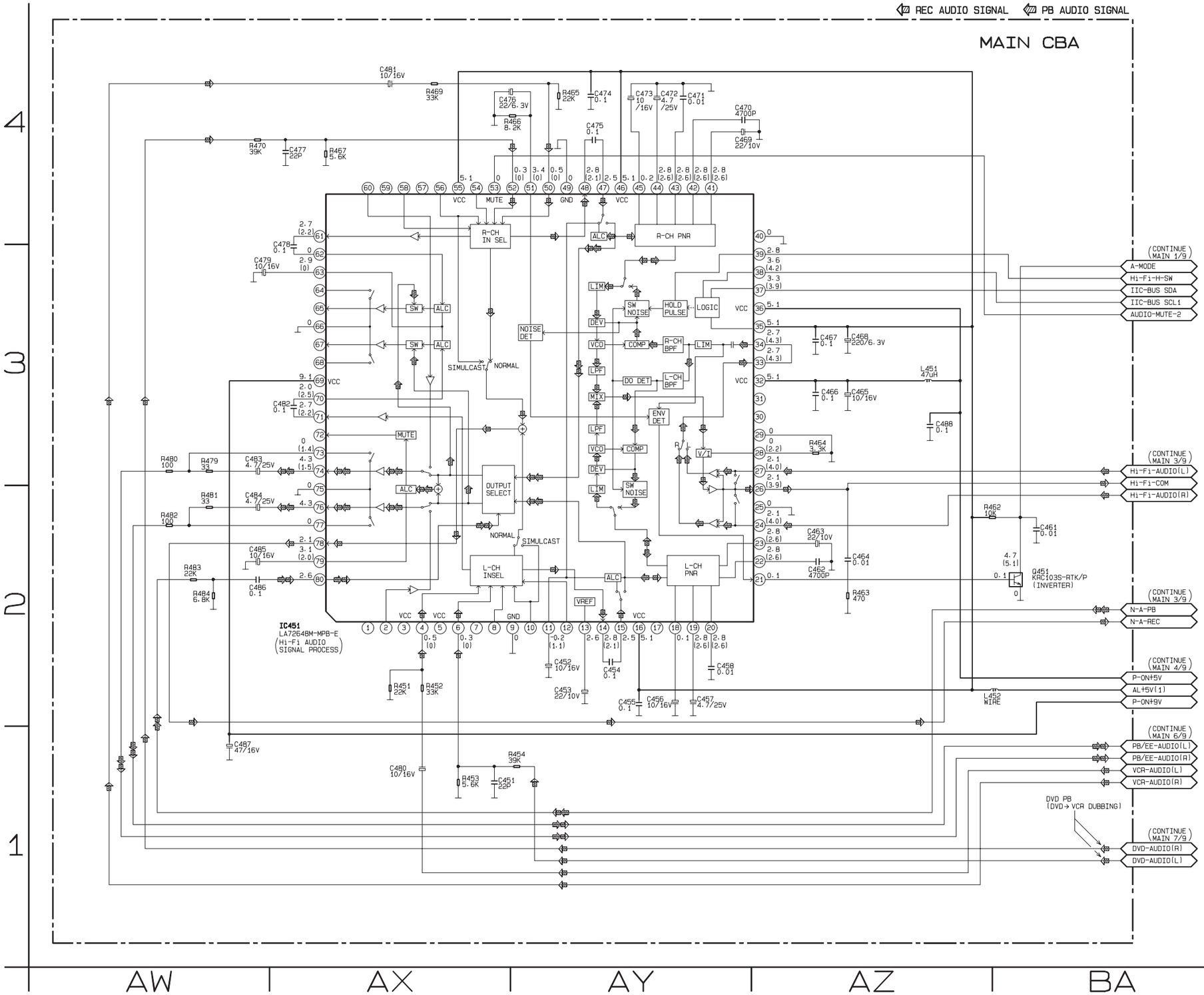
Main 7/9 Schematic Diagram < VCR Section >



Main 8/9 Schematic Diagram < VCR Section >



Main 9/9 Schematic Diagram < VCR Section >

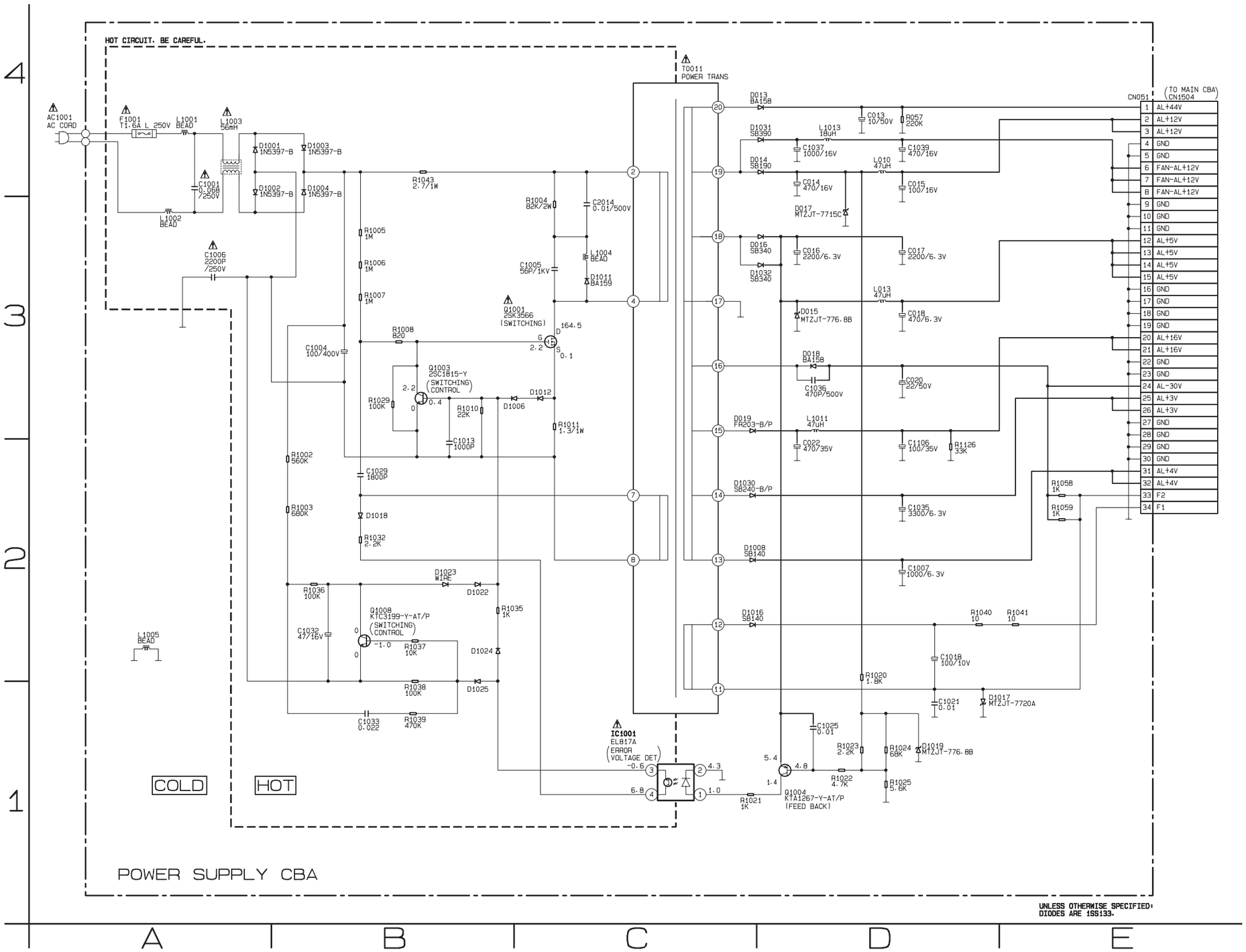


Power Supply Schematic Diagram < VCR Section >

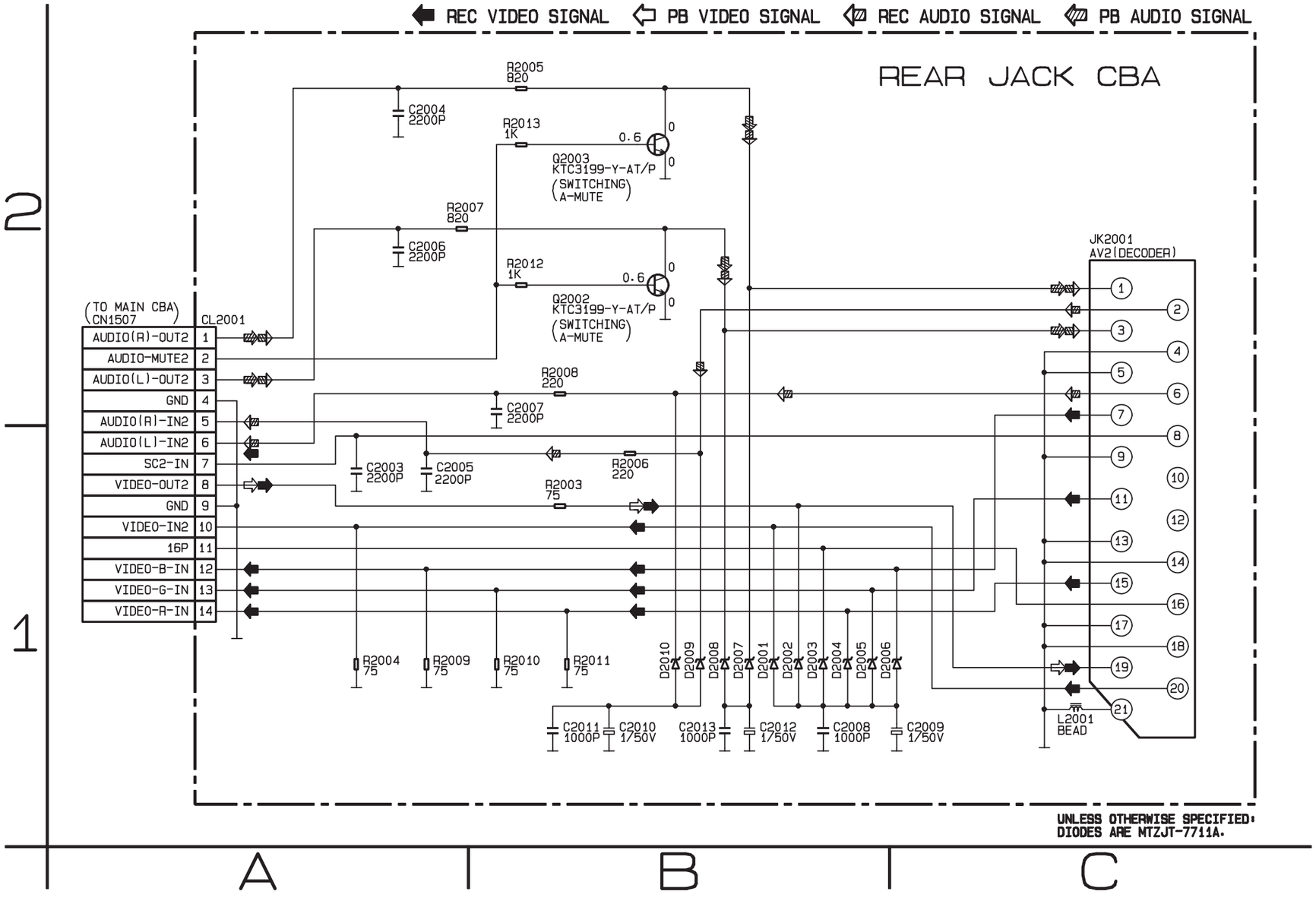
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

CAUTION !
For continued protection against fire hazard, replace only with the same type fuse.

NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.



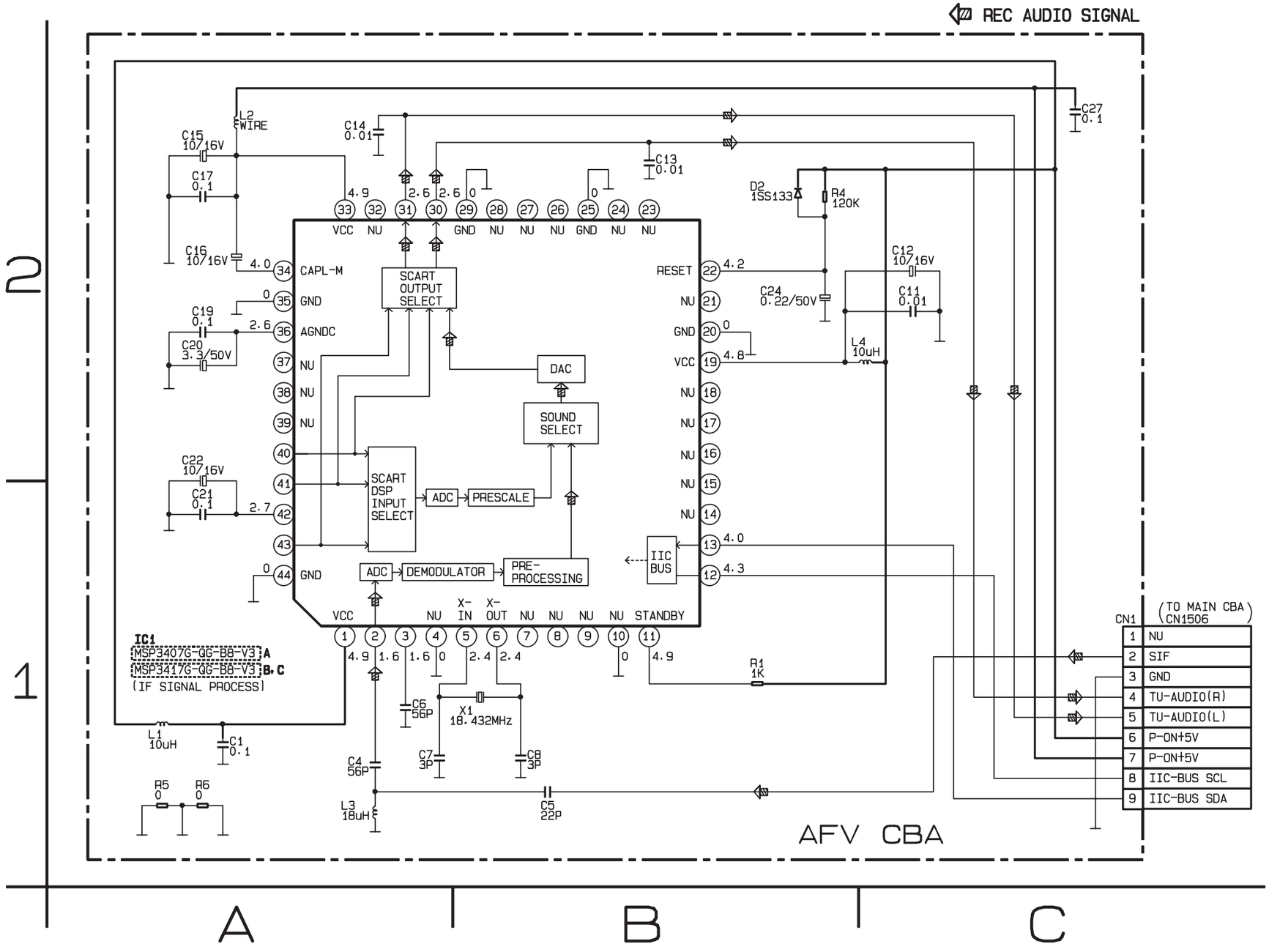
Rear Jack Schematic Diagram < VCR Section >



AFV Schematic Diagram < VCR Section >

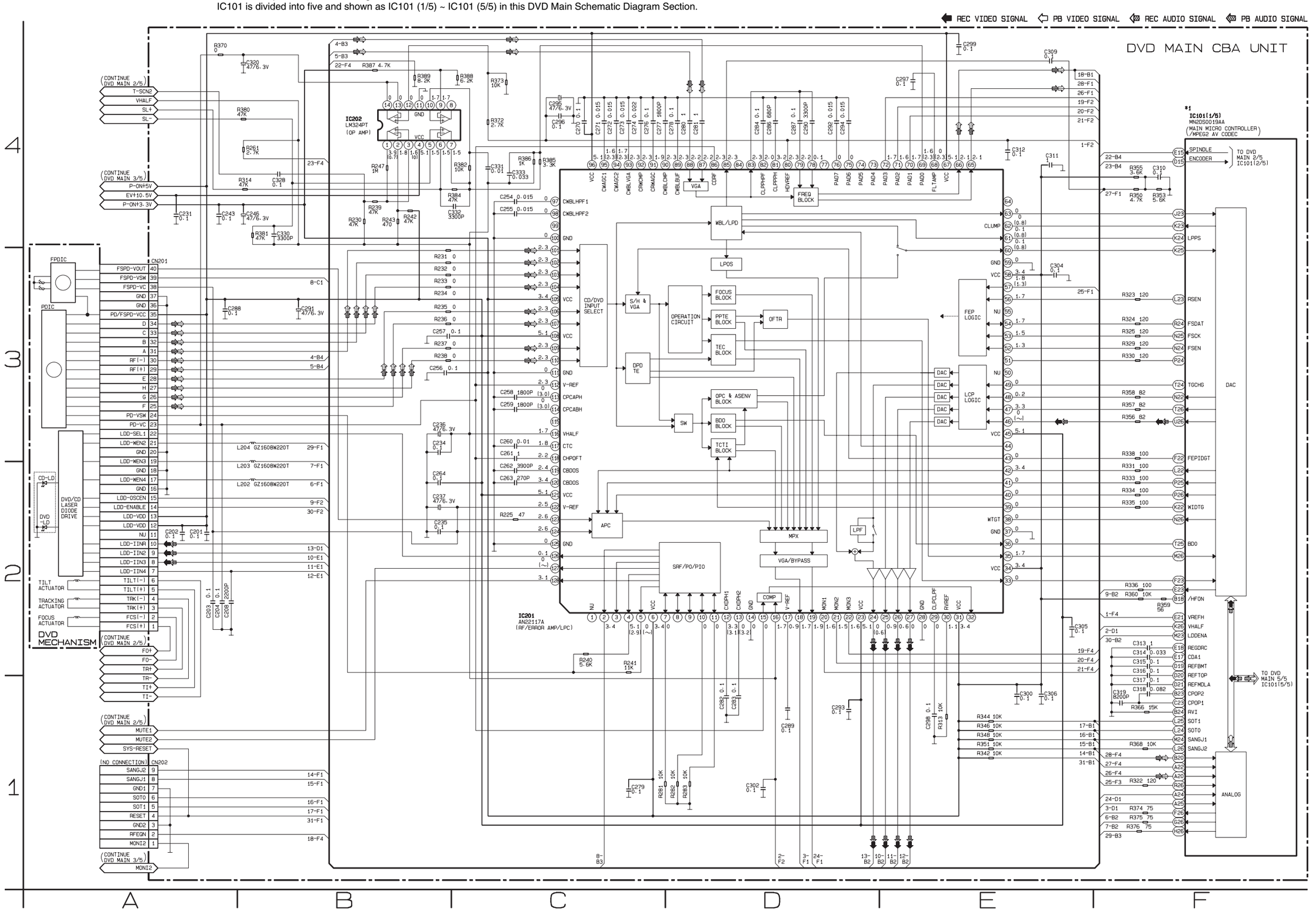
Comparison Chart of Models and Marks

MODEL	MARK
W4A-A4180DB	A
W4A-D4180DB	B
W4D-D4180DB	C



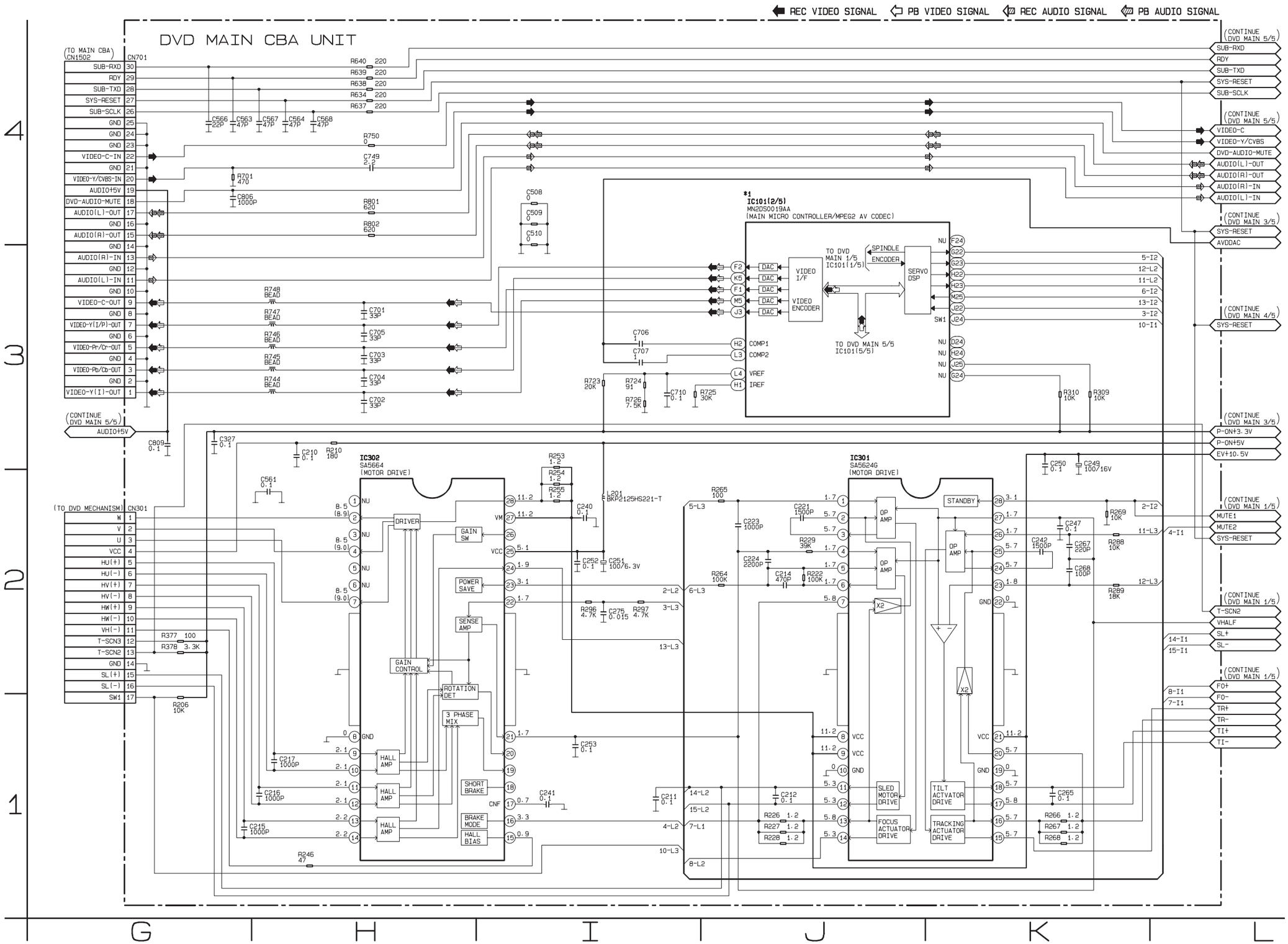
DVD Main 1/5 Schematic Diagram < DVD Section >

∗1 NOTE:
The order of pins shown in this diagram is different from that of actual IC101.
IC101 is divided into five and shown as IC101 (1/5) ~ IC101 (5/5) in this DVD Main Schematic Diagram Section.



DVD Main 2/5 Schematic Diagram < DVD Section >

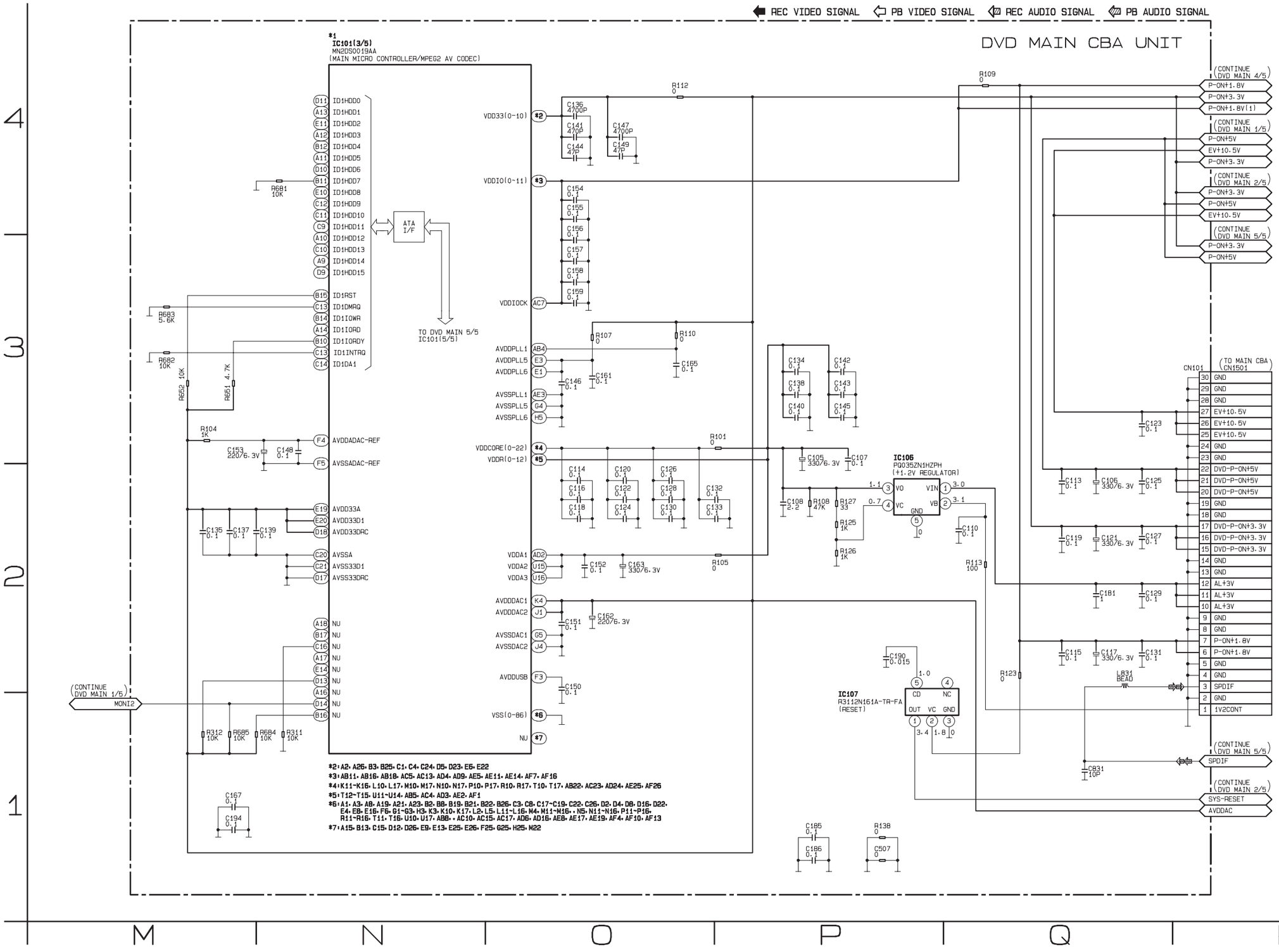
∗1 **NOTE:**
The order of pins shown in this diagram is different from that of actual IC101.
IC101 is divided into five and shown as IC101 (1/5) ~ IC101 (5/5) in this DVD Main Schematic Diagram Section.



E9G00SCD2

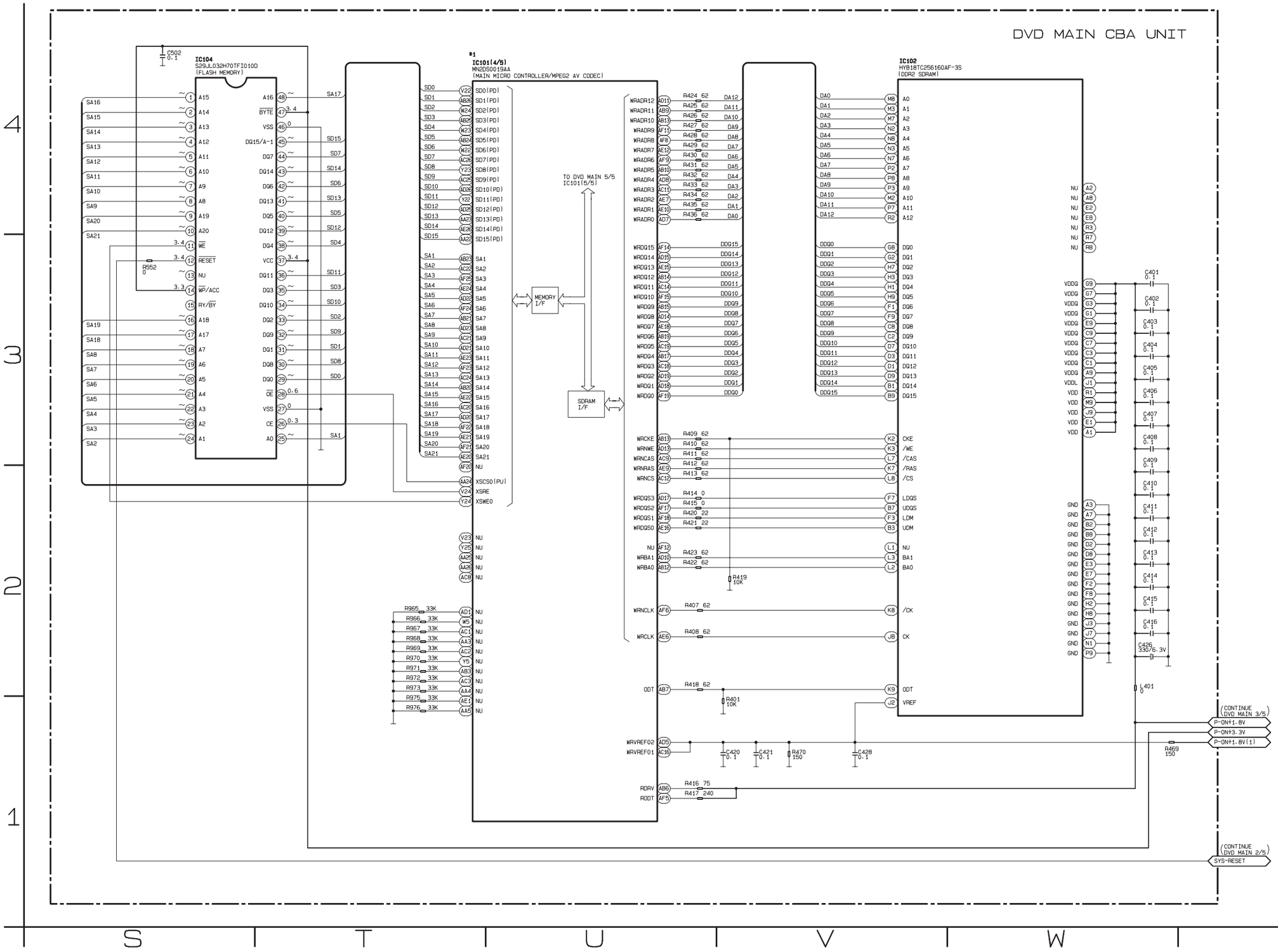
DVD Main 3/5 Schematic Diagram < DVD Section >

∗1 NOTE:
The order of pins shown in this diagram is different from that of actual IC101.
IC101 is divided into five and shown as IC101 (1/5) ~ IC101 (5/5) in this DVD Main Schematic Diagram Section.


REC VIDEO SIGNAL
PB VIDEO SIGNAL
REC AUDIO SIGNAL
PB AUDIO SIGNAL
DVD MAIN CBA UNIT
∗1
IC101(3/5)
MN2DS0019AA
(MAIN MICRO CONTROLLER/MPEG2 AV CODEC)
ATA I/F
TO DVD MAIN 5/5 IC101(5/5)
IC106
PQ035ZN1HZPH
(+1.2V REGULATOR)
IC107
R3112N161A-TR-FA
(RESET)
CN101
(TO MAIN CBA CN1501)
(CONTINUE DVD MAIN 4/5)
P-ON+1.8V
P-ON+3.3V
P-ON+1.8V(1)
(CONTINUE DVD MAIN 1/5)
P-ON+5V
EV+10.5V
P-ON+3.3V
(CONTINUE DVD MAIN 2/5)
P-ON+3.3V
P-ON+5V
EV+10.5V
(CONTINUE DVD MAIN 5/5)
P-ON+3.3V
P-ON+5V
(CONTINUE DVD MAIN 1/5)
MON12
(CONTINUE DVD MAIN 5/5)
SPDIF
(CONTINUE DVD MAIN 2/5)
SYS-RESET
AVDDAC
∗2 A2, A26, B3, B25, C1, C4, C24, D5, D23, E6, E22
∗3 AB11, AB16, AB18, AC5, AC13, AD4, AD9, AE5, AE11, AE14, AF7, AF16
∗4 K11~K16, L10, L17, M10, M17, N10, N17, P10, P17, R10, R17, T10, T17, AB22, AC23, AD24, AE25, AF26
∗5 T12~T15, U11~U14, AB5, AC4, AD3, AE2, AF1
∗6 A1, A3, A8, A19, A21, A23, B2, B8, B19, B21, B22, B26, C3, C8, C17~C19, C22, C26, D2, D4, D8, D16, D22, E4, E8, E16, F6, G1~G3, H3, K3, K10, K17, L2, L5, L11~L16, M4, M11~M16, N5, N11~N16, P11~P16, R11~R16, T11, T16, U10, U17, AB8, AC10, AC15, AC17, AD6, AD16, AE8, AE17, AE19, AF4, AF10, AF13
∗7 A15, B13, C15, D12, D26, E9, E13, E25, E26, F25, G25, H25, M22

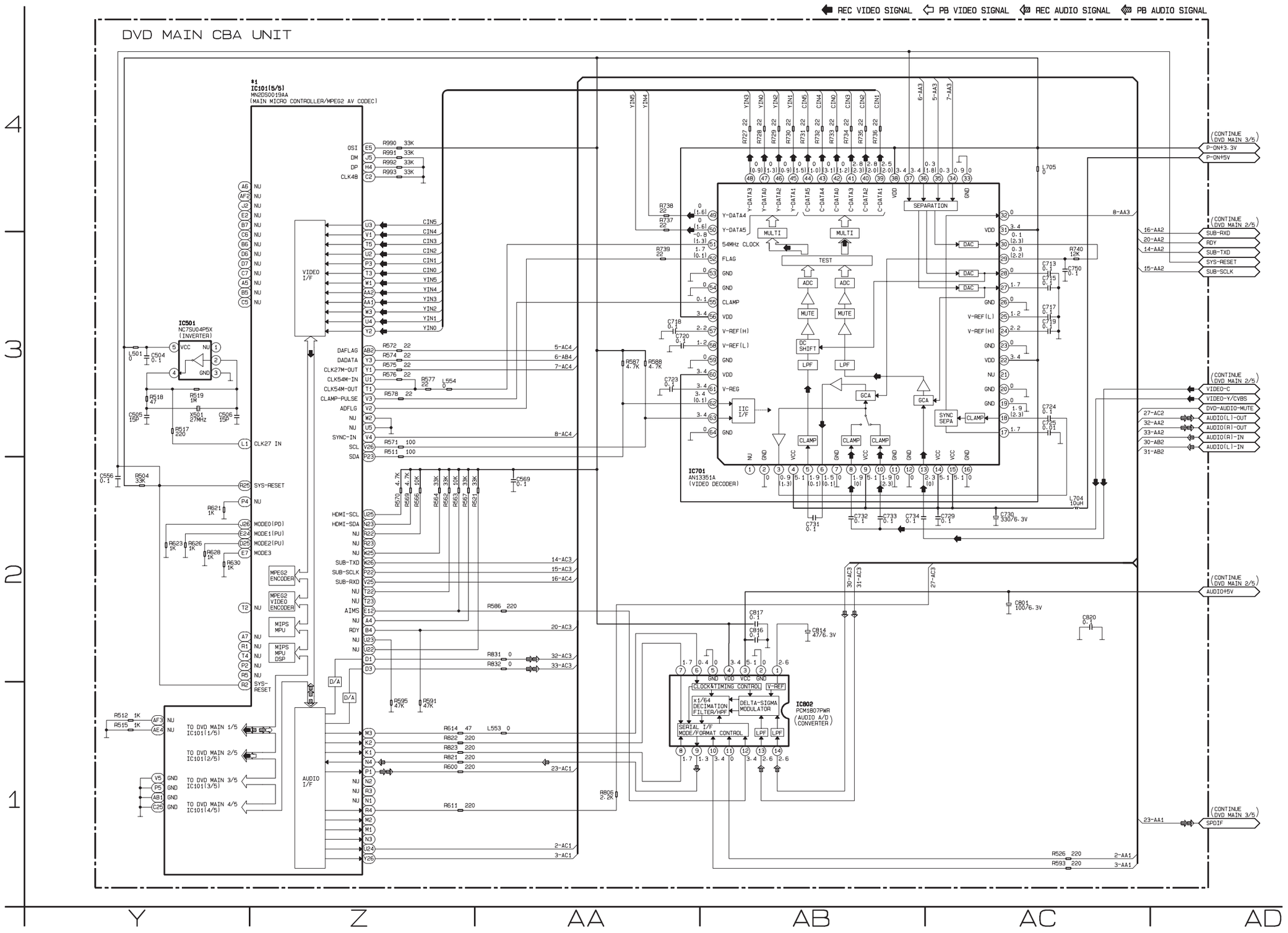
DVD Main 4/5 Schematic Diagram < DVD Section >

∗1 **NOTE:**
The order of pins shown in this diagram is different from that of actual IC101.
IC101 is divided into five and shown as IC101 (1/5) ~ IC101 (5/5) in this DVD Main Schematic Diagram Section.



DVD Main 5/5 Schematic Diagram < DVD Section >

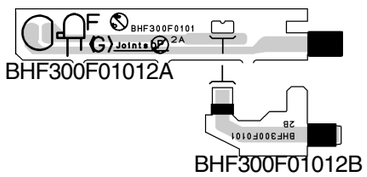
∗1 NOTE:
The order of pins shown in this diagram is different from that of actual IC101.
IC101 is divided into five and shown as IC101 (1/5) ~ IC101 (5/5) in this DVD Main Schematic Diagram Section.



E9G00SCD5

Main CBA Top View

Sensor CBA Top View



WF3
J236
JK1-V-OUT

WF2
TP301
C-PB

VR501
SW-POINT

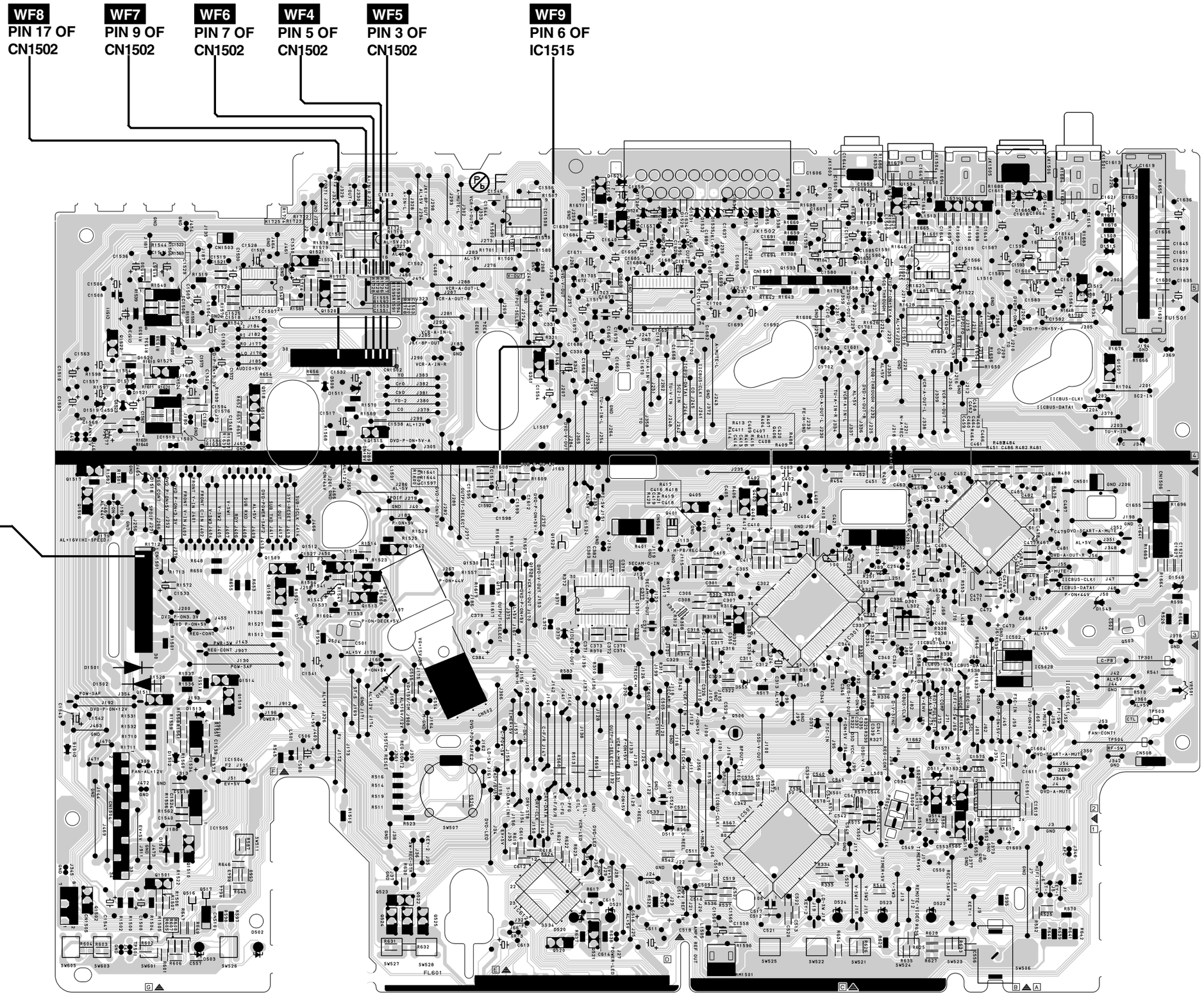
TP503
CTL

WF1
TP504
RF-SW

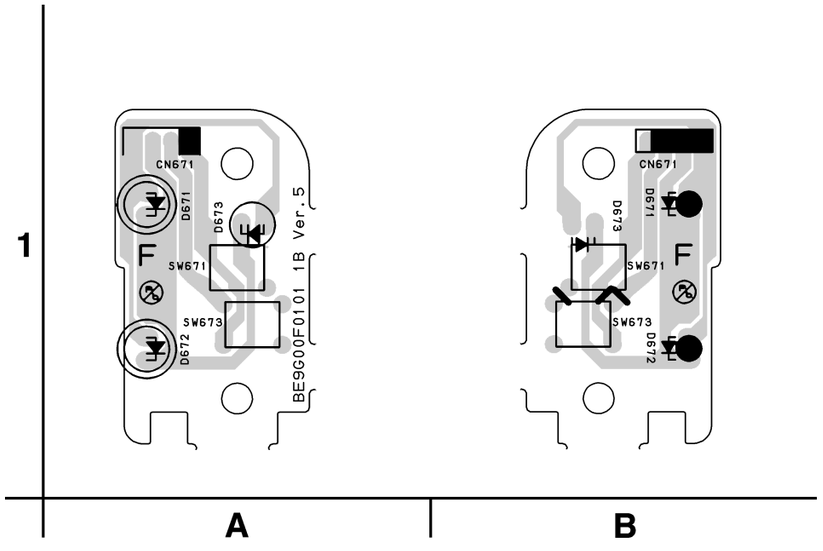
TP501
S-INH

BE9G00F01011A

Main CBA Bottom View

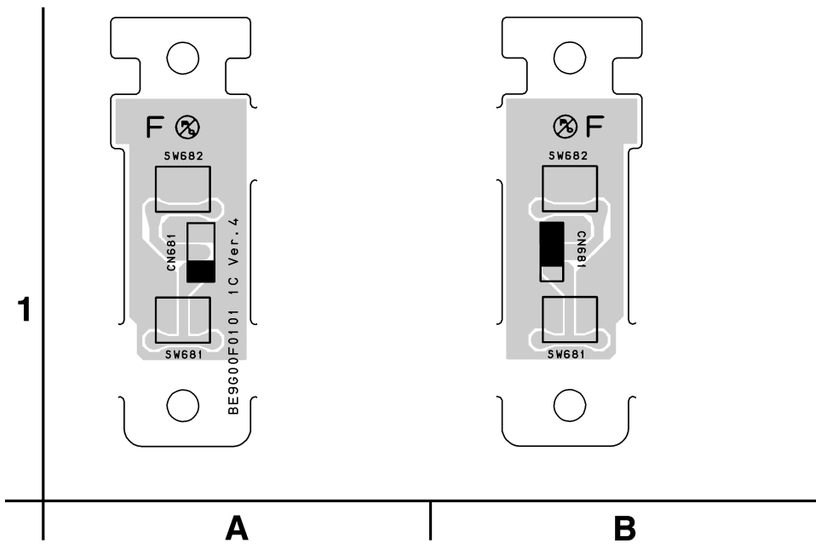


Power SW CBA Top View **Power SW CBA Bottom View**



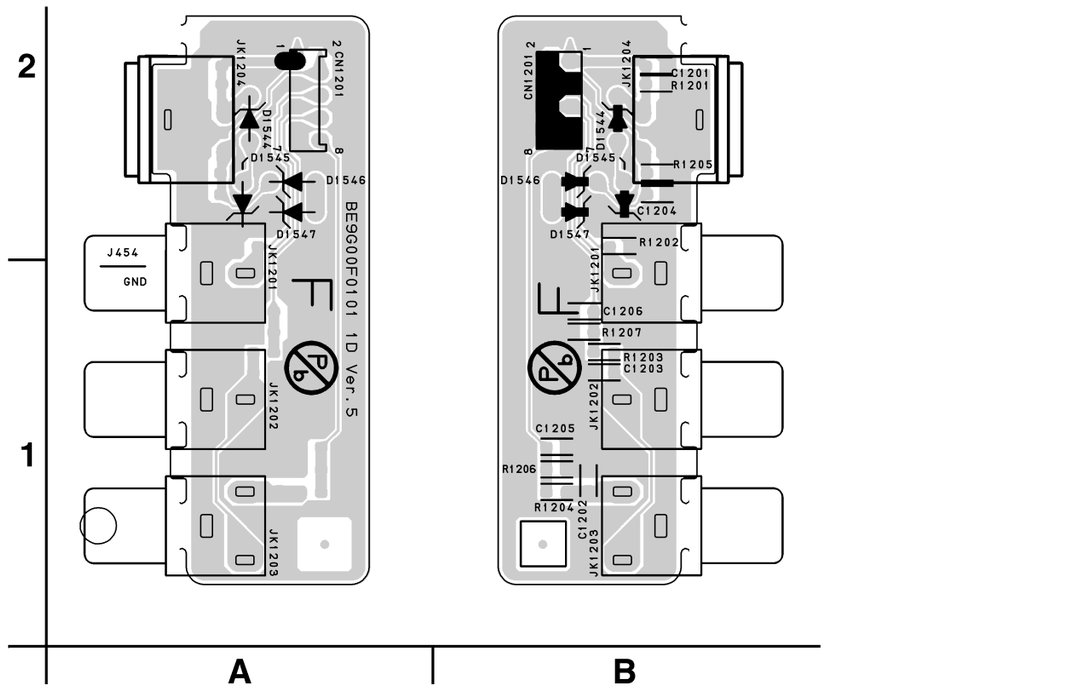
BE9G00F01011B

Function CBA Top View **Function CBA Bottom View**



BE9G00F01011C

Front Jack CBA Top View **Front Jack CBA Bottom View**



BE9G00F01011D

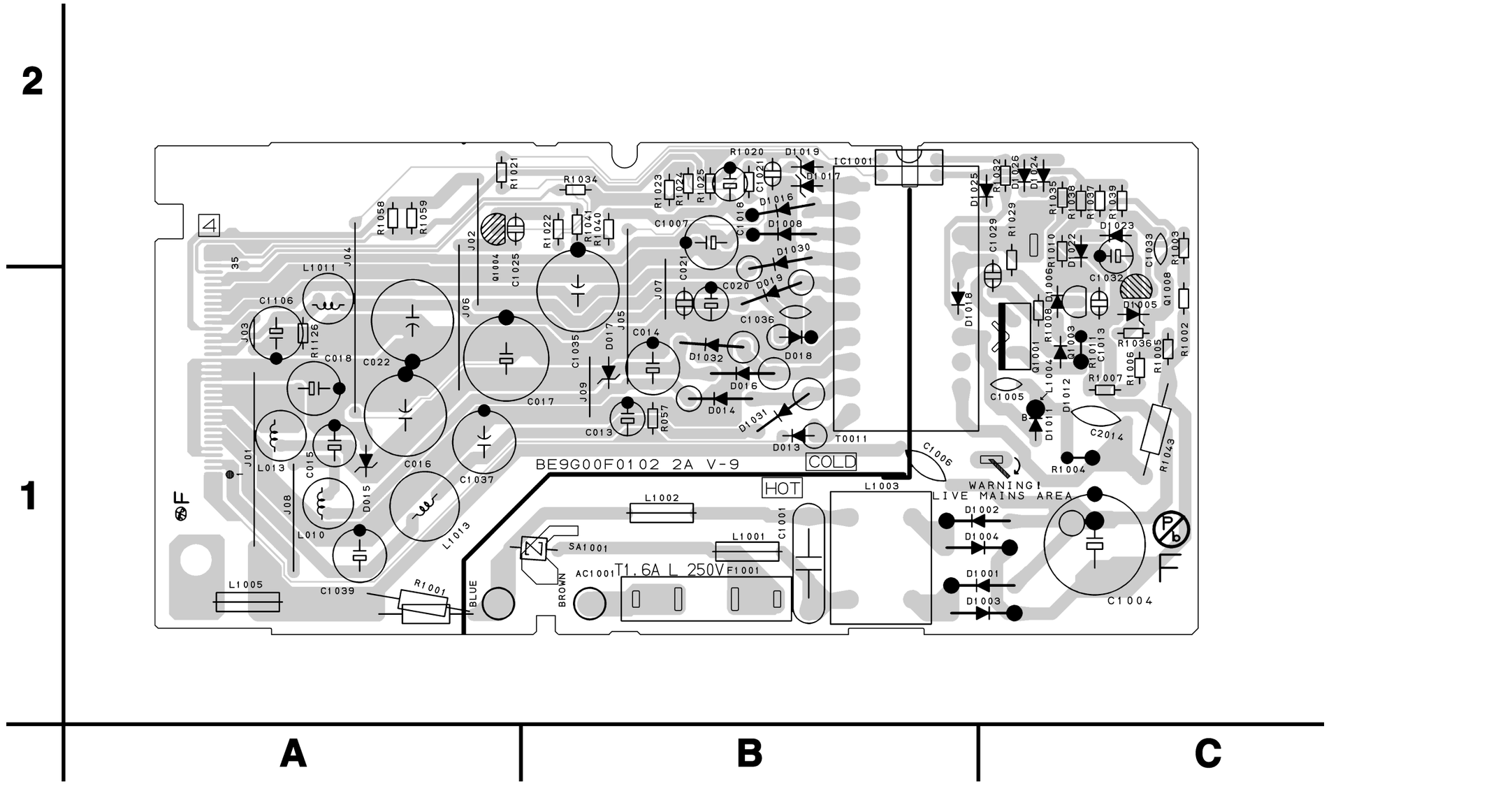
Power Supply CBA Top View

CAUTION !
For continued protection against fire hazard, replace only with the same type fuse.

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit. If Main Fuse (F1001) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

Because a hot chassis ground is present in the power supply circut, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly, when troubleshooting this type power supply circuit, a variable isolation transformer is required.

NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.



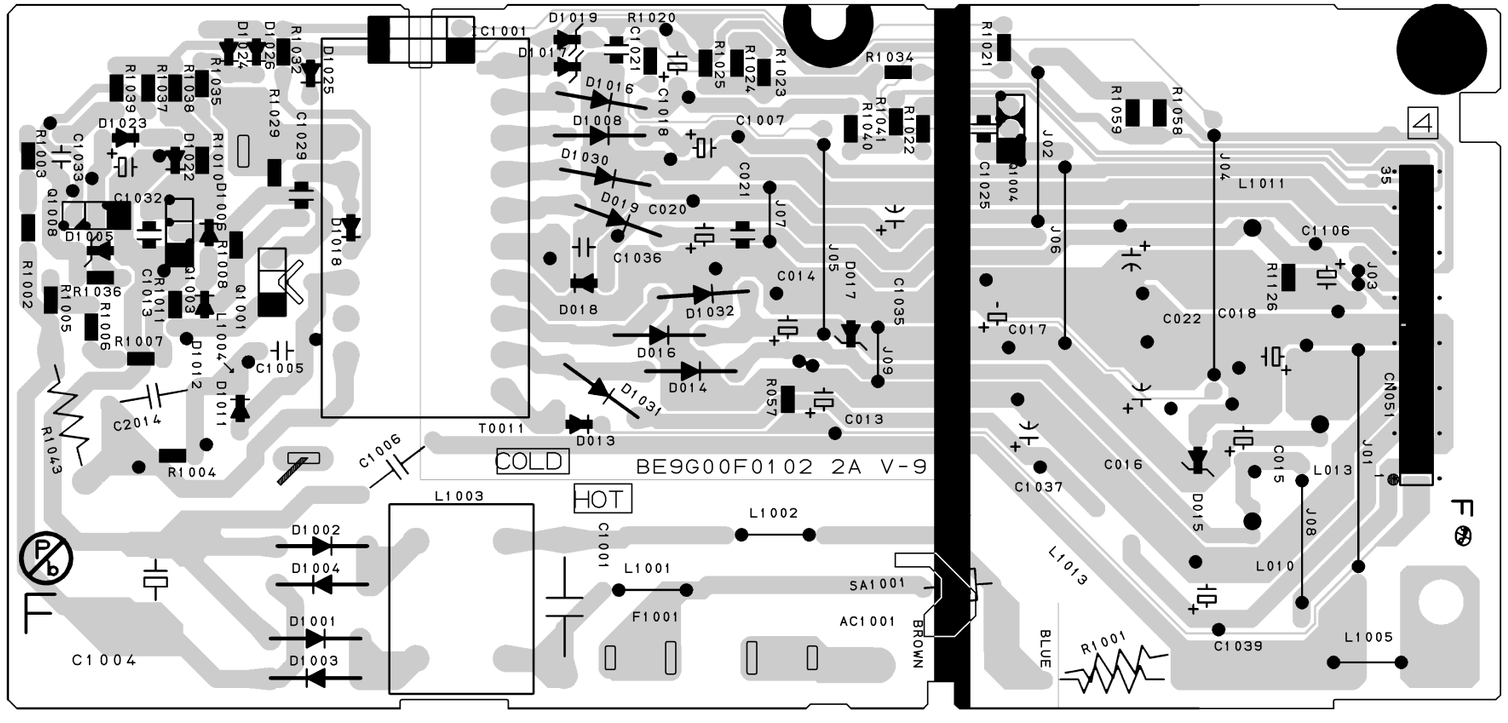
Power Supply CBA Bottom View

CAUTION !
For continued protection against fire hazard, replace only with the same type fuse.

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit. If Main Fuse (F1001) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

Because a hot chassis ground is present in the power supply circut, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly, when troubleshooting this type power supply circuit, a variable isolation transformer is required.

NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

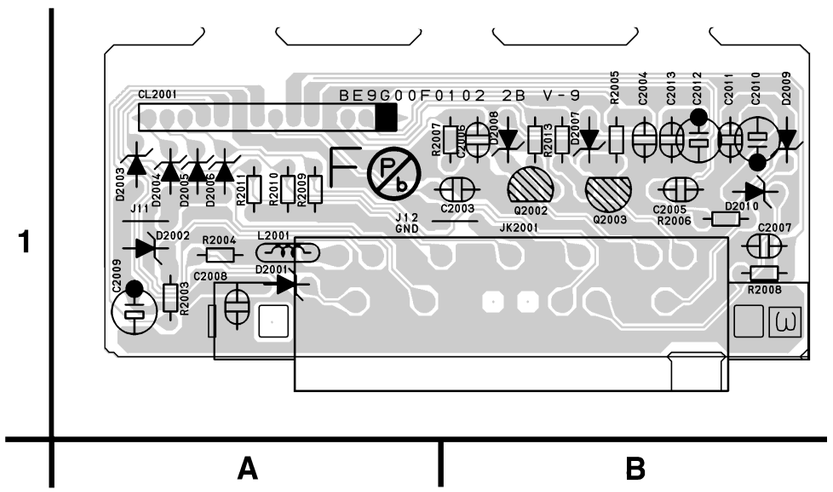


2

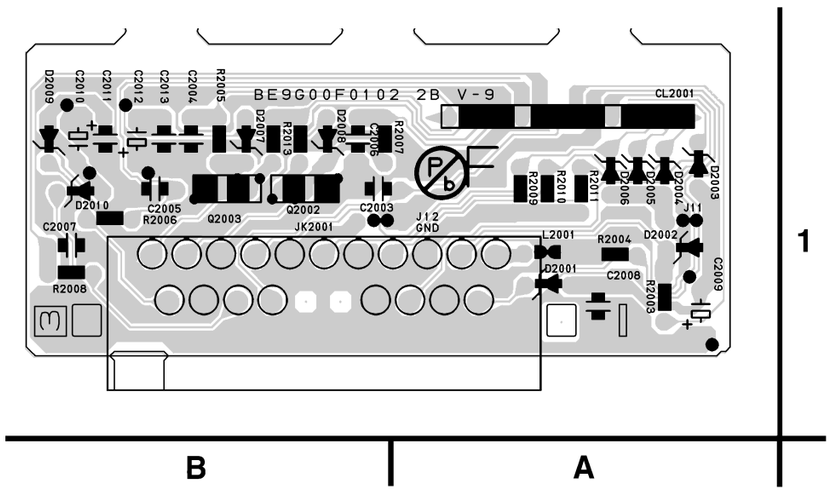
1

C B A

REAR JACK CBA Top View

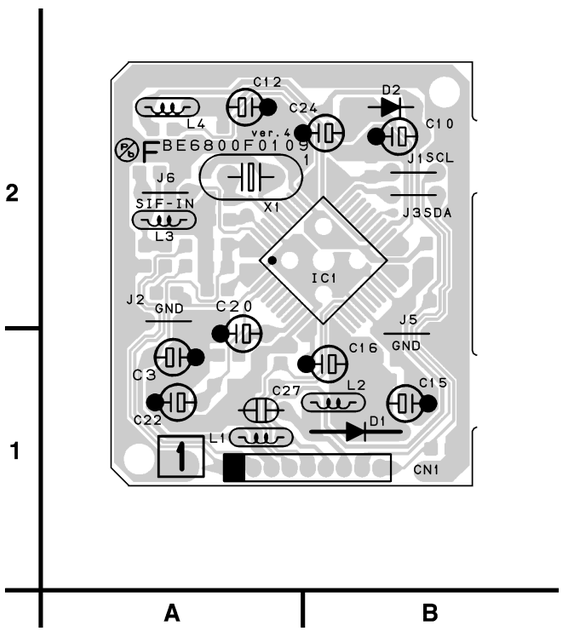


REAR JACK CBA Bottom View

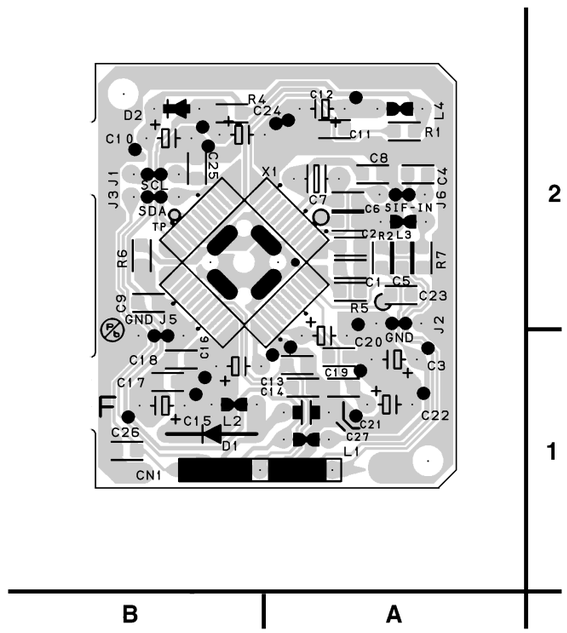


BE9B00F01022B

AFV CBA Top View



AFV CBA Bottom View

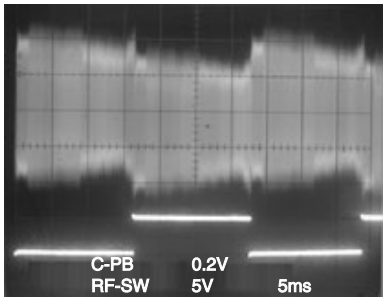


BE6800F01091

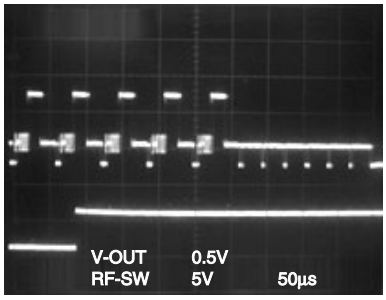
WAVEFORMS

NOTE:
Input: COLOR BAR SIGNAL (WITH 1KHz AUDIO SIGNAL)

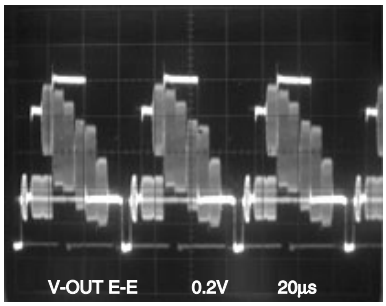
WF2 UPPER TP301
WF1 LOWER TP504



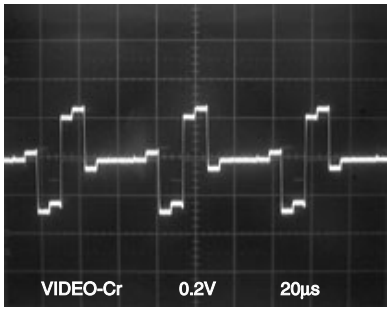
WF3 UPPER J236
WF1 LOWER TP504



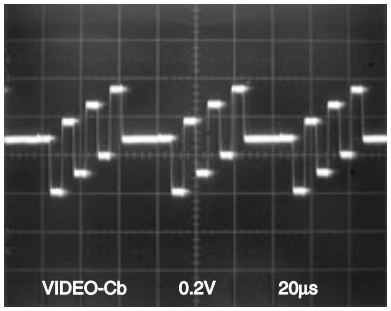
WF3 J236



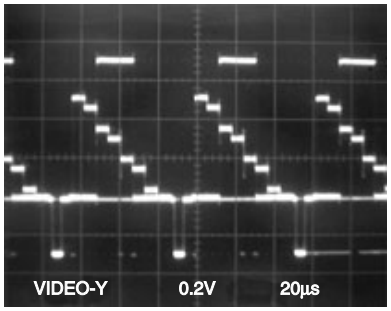
WF4 Pin 5 of CN1502



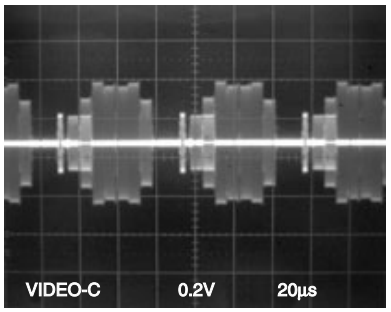
WF5 Pin 3 of CN1502



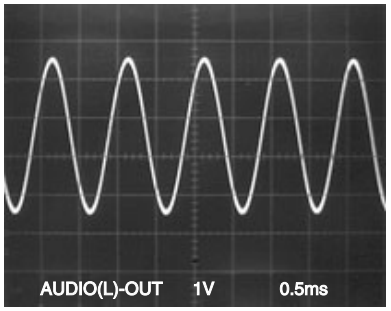
WF6 Pin 7 of CN1502



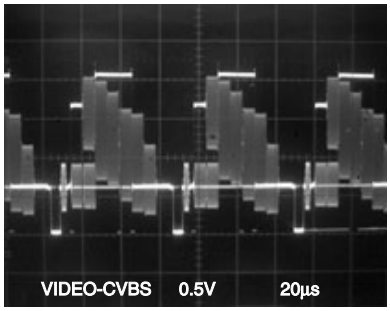
WF7 Pin 9 of CN1502



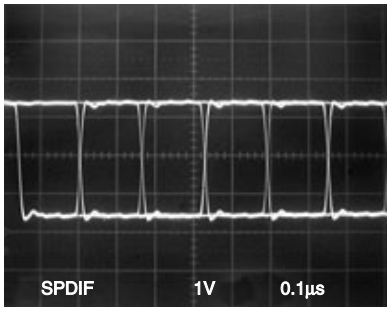
WF8 Pin 17 of CN1502



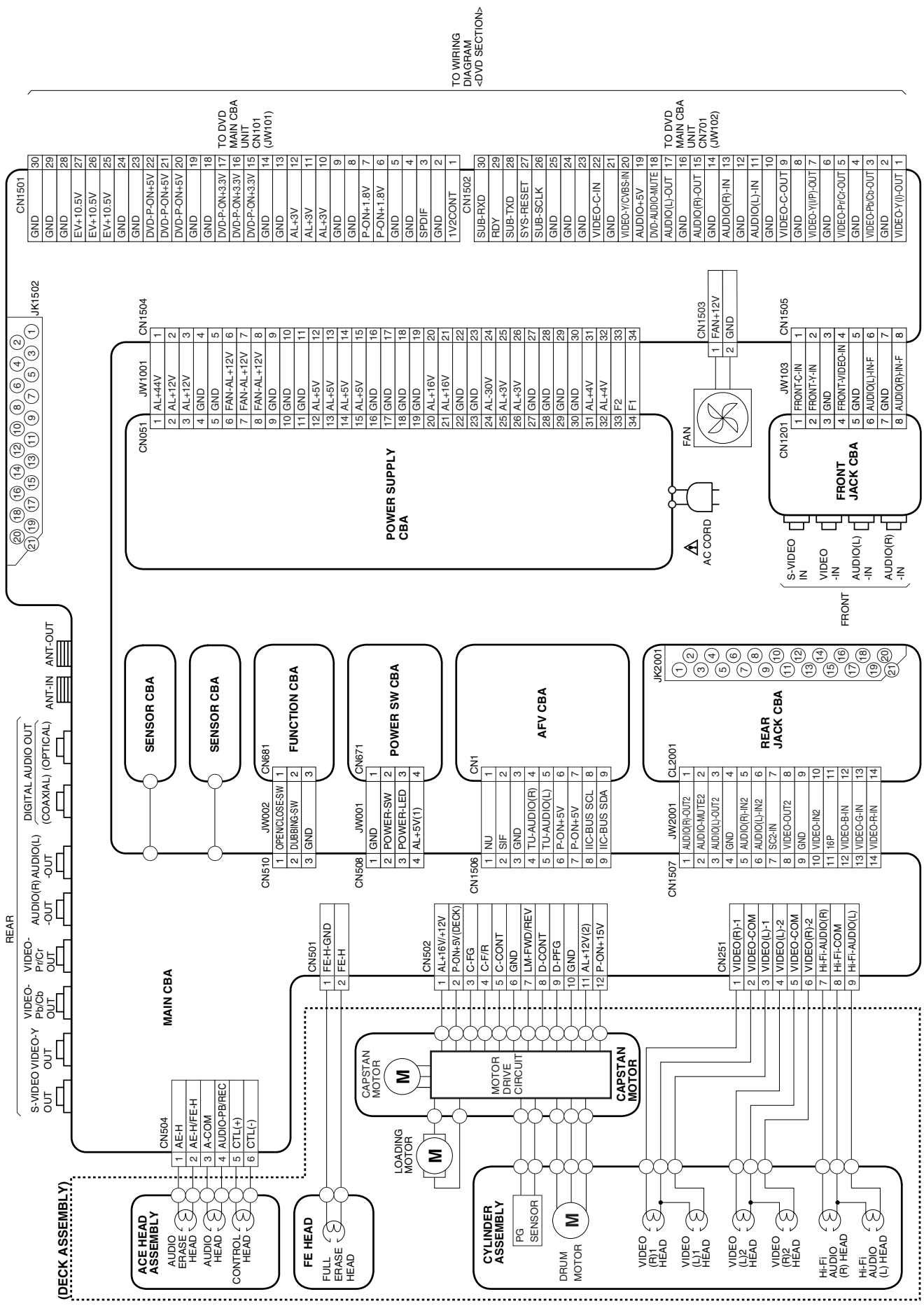
WF9 Pin 6 of IC1515



WF10 Pin 3 of CN1501



WIRING DIAGRAM < VCR SECTION >



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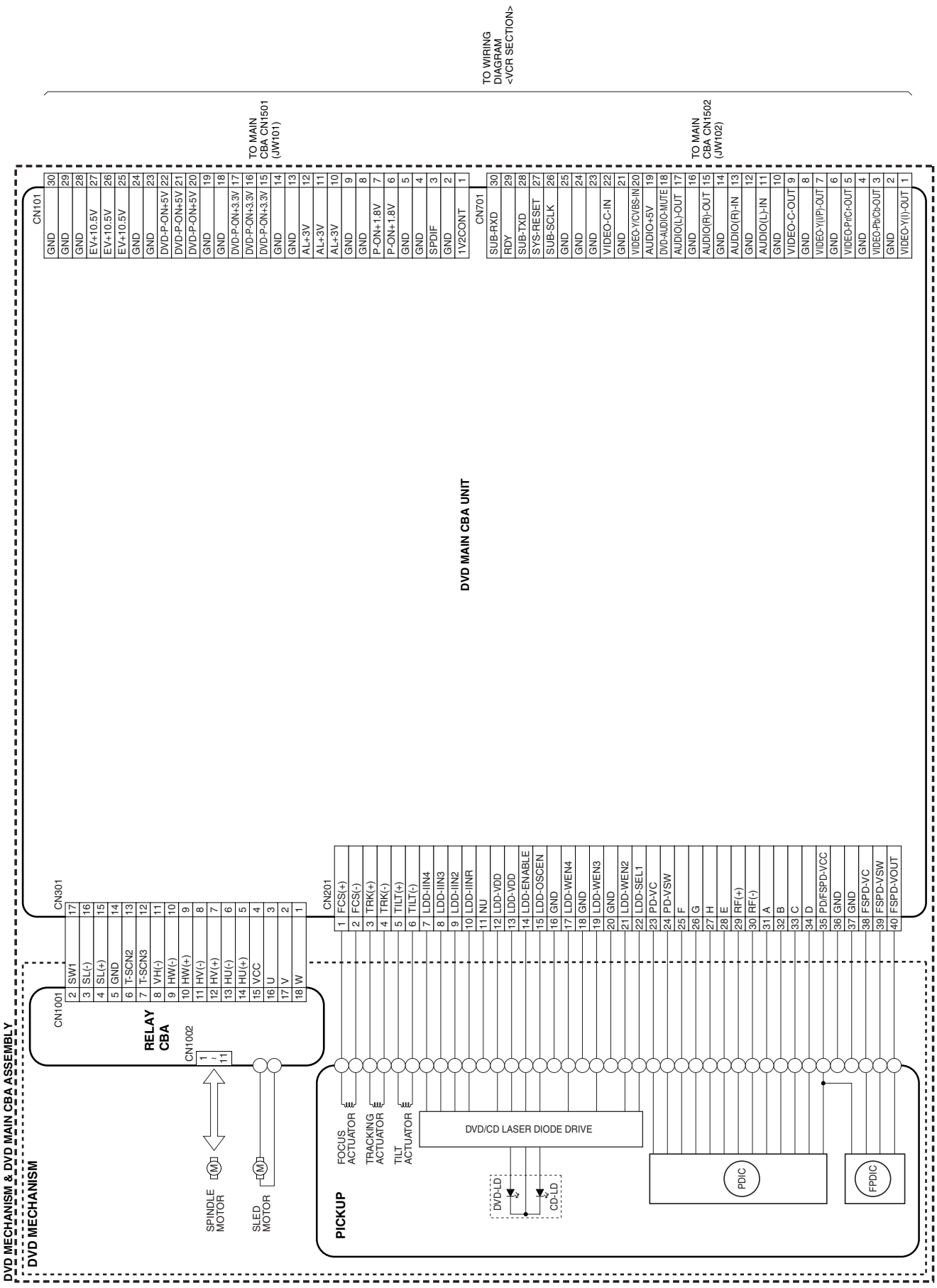


IC PIN FUNCTION DESCRIPTIONS

< VCR Section >

Comparison Chart of Models and Marks

Model	Mark
W4A-A4180DB	A
W4A-D4180DB	B
W4D-D4180DB	C

IC501(SERVO / SYSTEM CONTROL)

Pin No.	Mark	IN/ OUT	Signal Name	Function
1		IN	SC2-IN	Input Signal from Pin 8 of SCART2
2		IN	PG-DELAY	Video Head Switching Pulse Signal Adjusted Voltage
3		IN	DVD-POW-SAFETY	Abnormal Voltage Detection
4		IN	END-S	Tape End Position Detect Signal
5		IN	AFC	Automatic Frequency Control Signal
6		IN	V-ENV	Video Envelope Comparator Signal
7		IN	KEY-1	Key Data Input 1
8		IN	KEY-2	Key Data Input 2
9		IN	LD-SW	Deck Mode Position Detector Signal
10		IN	ST-S	Tape Start Position Detector Signal
11		OUT	FAN-CONT1	Fan Motor Control Signal
12		-	NU	Not Used
13		OUT	D-V-SYNC	Dummy V-sync Output
14		IN	REMOTE	Remote Signal Input
15		OUT	C-ROTA	Color Phase Rotary Changeover Signal
16		OUT	H-A-SW	Video Head Amp Switching Pulse
17		IN	H-A-COMP	Head Amp Comparator Signal
18		OUT	RF-SW	Video Head Switching Pulse
19		OUT	Hi-Fi-H-SW	HiFi Audio Head Switching Pulse
20		OUT	I/P-SW	Progressive/Interlace Data Output
21		-	NU	Not Used
22		OUT	VIDEO-SW1	Video Input Select Signal 1
23		OUT	VIDEO-SW2	Video Input Select Signal 2
24		OUT	VIDEO-SW3	Video Input Select Signal 3
25		OUT	REG-CONT2	Power Regulator Control Signal
26		OUT	DVD-AUDIO-MUTE	DVD Audio Mute Control Signal
27		OUT	RGB-THROUGH	SCART 2 RGB Through Control Signal
28		OUT	AUDIO-MUTE-2	Audio Mute Control Signal
29		OUT	DVD-AUDIO-MUTE2	DVD Audio Mute Control Signal
30		OUT	DVD-SCART-AUDIO-MUTE	DVD SCART Audio Mute Control Signal
31		IN	REC-SAF-SW	Recording Safety SW Detect (With Record tab="L"/ With out Record tab="H")
32		IN	P-DOWN -H	Power Voltage Down Detector Signal
33		OUT	D-REC-H	Delayed Record Signal
34		IN	RESET	System Reset Signal (Reset="L")
35		IN	Xcin	Sub Clock Input
36		OUT	Xcout	Sub Clock Output
37		-	Vcc	+5V Power Supply (Timer)
38		IN	Xin	Main Clock Input
39		OUT	Xout	Main Clock Output
40		-	Vss	Ground
41		OUT	PWR-SW	DVD Power Supply Control Signal
42		OUT	REG-CONT	Power Regulator Control Signal
43		-	NU	Ground
44		IN	OSCin	Clock Input for letter size
45		OUT	OSCout	Clock Output for letter size
46		-	NU	Ground
47		IN	LP	LP
48		IN	FSC-IN [4.43MHz]	4.43MHz Clock Input
49		-	OSDVss	OSDVss
50		IN	OSD-V-IN	OSD Video Signal Input
51		-	NU	Not Used

Pin No.	Mark	IN/ OUT	Signal Name	Function
52		OUT	OSD-V-OUT	OSD Video Signal Output
53		-	OSDVcc	+5V at Power On Signal
54		-	HLF	LPF Connected Terminal (Slicer)
55	A,B	-	NU	Not Used
	C	IN	COLOR-IN	SECAM or MESECAM Chroma Video Input Signal at Super Impose
56		-	NU	Not Used
57		-	NU	Not Used
58		IN	C-SYNC	Composite Synchronized Pulse
59		OUT	8POUT-1	Control SCART 1 8Pin Level by using 8POUT-1 and 8POUT-2
60		OUT	8POUT-2	Control SCART 1 8Pin Level by using 8POUT-1 and 8POUT-2
61		-	NU	Not Used
62		-	NU	Not Used
63		OUT	SYSTEM-RESET	System Reset Signal
64		IN	READY/ BUSY	Ready/Busy communication Control with Main Micro Controller
65		OUT	S-DATA-OUT	Communication of Data from VCR Micro Controller
66		IN	S-DATA-IN	Communication of Data to VCR Micro Controller
67		OUT	S-CLOCK	Communication of Clock with VCR Micro Controller
68		OUT	DRV-DATA	VFD Driver IC Control Data
69		OUT	DRV-STB	VFD Driver IC Chip Select Signal
70		OUT	DRV-CLK	VFD Driver IC Control Clock
71		OUT	IIC-BUS SCL	IIC BUS Serial Clock
72		IN/ OUT	IIC-BUS SDA	IIC BUS Serial Data
73		-	NU	Not Used
74		-	NU	Not Used
75		OUT	P-ON-H	Power On Signal to High
76		OUT	C-CONT	Capstan Motor Control Signal
77		OUT	D-CONT	Drum Motor Control Signal
78		OUT	C-F/R	Capstan Motor FWD/REV Control Signal (FWD="L"/ REV="H")

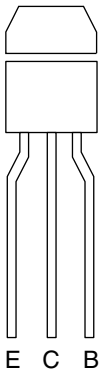
Pin No.	Mark	IN/ OUT	Signal Name	Function
79		IN	S-REEL	Supply Reel Rotation Signal
80		IN	T-REEL	Take Up Reel Rotation Signal
81		OUT	LM-FWD/ REV	Loading Motor Control Signal
82		OUT	OUTPUT-SELECT	Output Select
83		OUT	VCR-AUDIO-MUTE	Audio Mute Control Signal (Mute = "H")
84		OUT	C-POW-SW	Capstan Power Switching Signal
85		IN	VCR-POW-SAFETY	VCR Power Supply Safety Signal
86		IN	A-MODE	Hi-Fi Tape Detection Signal
87		IN	C-FG	Capstan Motor Rotation Detection Pulse
88		-	AMPVss	Ground
89		IN	DVD-POW-SAFETY	DVD Power Supply Safety Signal
90		IN	D-PFG	Drum PG/FG Input Signal
91		-	AMPVREF out	V-Ref for CTL AMP
92		-	AMPVREF in	V-Ref for CTL AMP
93		-	P80/C	P80/C Terminal
94		IN/ OUT	CTL (-)	Playback/Record Control Signal (-)
95		IN/ OUT	CTL (+)	Playback/Record Control Signal (+)
96		-	AMPC	CTL AMP Connected Terminal
97		-	CTL	To Monitor for CTL AMP Output
98		-	AMPVcc	Always +5V with AC Plug Connected
99		-	AVcc	Always +5V with AC Plug Connected
100		IN	AGC	IF AGC Comparator Signal

IC612 (VFD DRIVER)

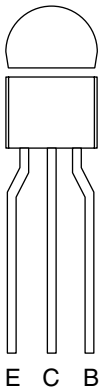
Pin No.	IN/ OUT	Signal Name	Name Function
1	OUT	POWER-LED	Power LED Control Signal
2	OUT	DVD-LED	DVD LED Control Signal
3	OUT	VCR-LED	VCR LED Control Signal
4	-	NU	Not Used
5	IN	OSC	Oscillator Input
6	-	NU	Not Used
7	IN	DRV-DIN	DRV-Serial Data
8	IN	DRV-CLK	DRV-Serial Clock
9	IN	DRV-STB	DRV-Serial Interface Strobe
10	-	NU	Not Used
11	-	NU	Not Used
12	-	VSS	Ground
13	-	VDD	+5V Power Supply
14	-	NU	Not Used
15	-	NU	Not Used
16	-	NU	Not Used
17	-	NU	Not Used
18	-	NU	Not Used
19	-	NU	Not Used
20	OUT	c	Segment Output
21		b	
22		a	
23		d	
24		e	
25		f	
26		g	
27		h	
28		i	
29	-	NU	Not Used
30	-	VEE	Pull Down Level
31	-	NU	Not Used
32	-	NU	Not Used
33	-	NU	Not Used
34	-	NU	Not Used
35	-	NU	Not Used
36	OUT	7G	Grid Output
37		6G	
38		5G	
39		4G	
40		3G	
41		2G	
42		1G	
43	-	VDD	+5V Power Supply
44	-	VSS	Ground

LEAD IDENTIFICATIONS

KRA103M-AT/P
KRA104M-AT/P
KRC103M-AT/P
KTA1267-(GR,Y)-AT/P
KTA1273-Y-AT/P
KTA1281Y-AT/P
KTC3199-(BL,GR,Y)-AT/P
RN1203(TE4 F T)
RN2203(TE4 F T)
RN2204(TE4 F T)



2SA1015-GR(TE2 F T)
2SA1020-Y(TE6 F M)
2SC1815-(BL,GR,Y)(TE2 F T)
2SC2120-Y(TE2 F T)
2SC3266-Y(TPE2 F)
KTA-1266-GR-AT/P
KTC3198-(GR,Y)-AT/P
KTC3203-Y-AT/P
KTC3205-Y-AT/P



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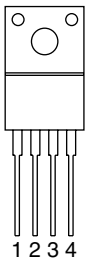
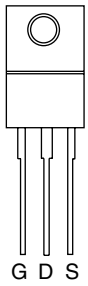
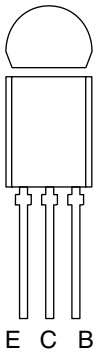


2SK3566



2SA966-Y(TE6 F M)



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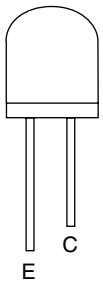
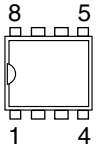
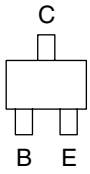
PT204-6B-12



KIA4558P/P
RC4580IP
UTC4558
UTC4580



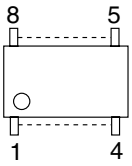
2SC2412K T146Z
2SC3928A-T112-1Z
KRC103S-RTK/P
KTC3875S-(GR,Y)-RTK/P
KTC3879-Y-RTK/P



EL817(A,B)
PS2561A-1(Q,W)

1: Anode
2: Cathode
3: Emitter
4: Collector

MM1636XWRE



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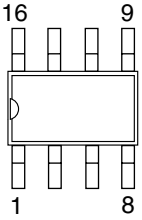
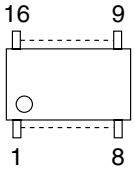
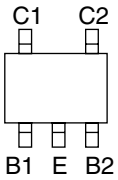


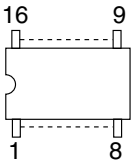
4052L-S16-R
4053L-S16-R
MM1637XVBE



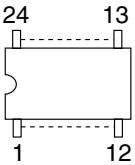
FMG4A T148
RN1511(TE85R.F)



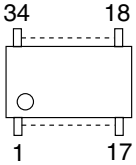
TC4052BF(EL N F)
TC4053BF(EL N F)
CD4052BNSR
CD4053BNSR



MM1697AJBE

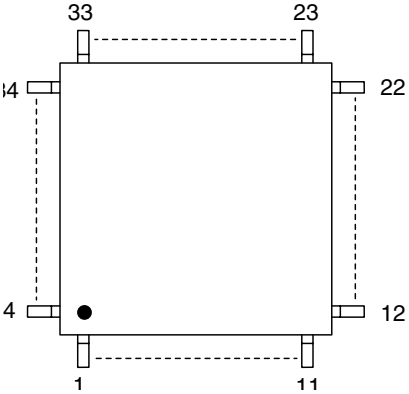


MM1443XJBE

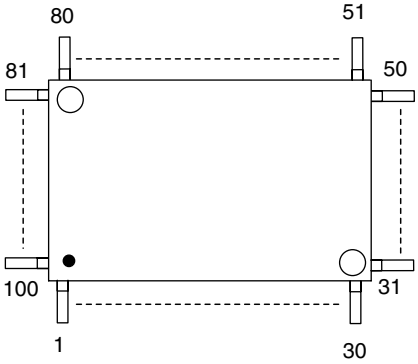


Note:
A: Anode
K: Cathode
E: Emitter
C: Collector
B: Base
R: Reference
S: Source
G: Gate
D: Drain

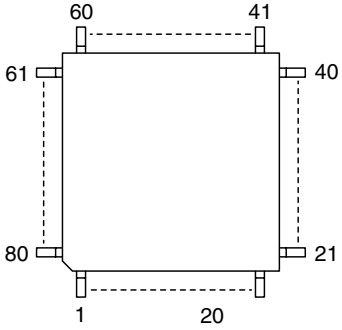
MSP3407G-QG-B8-V3
MSP3417G-QG-B8-V3
PT6315(L)



M3776AMCH-AG1GP
LA71750EM-MPB-E

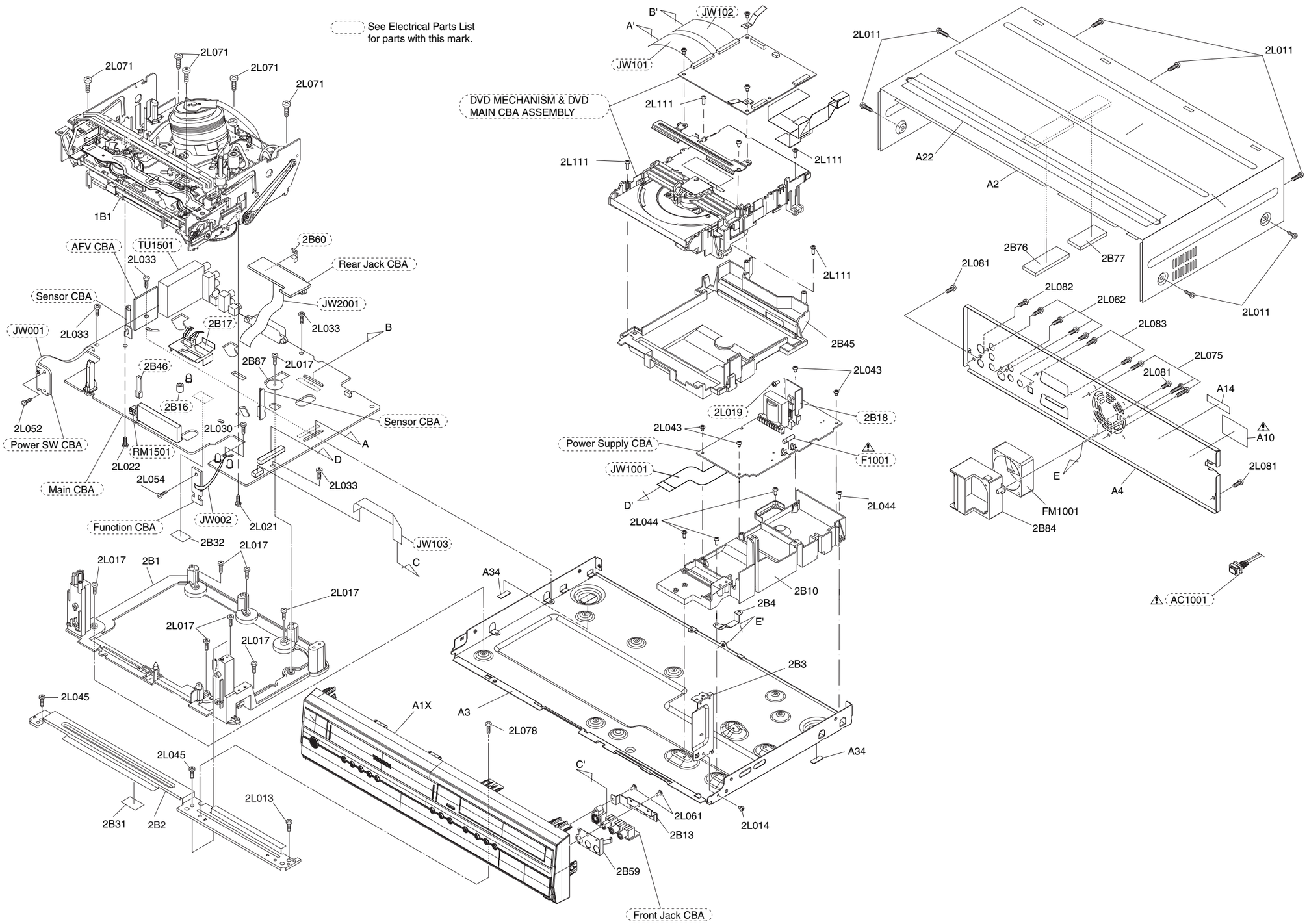


LA72648M-MPB-E

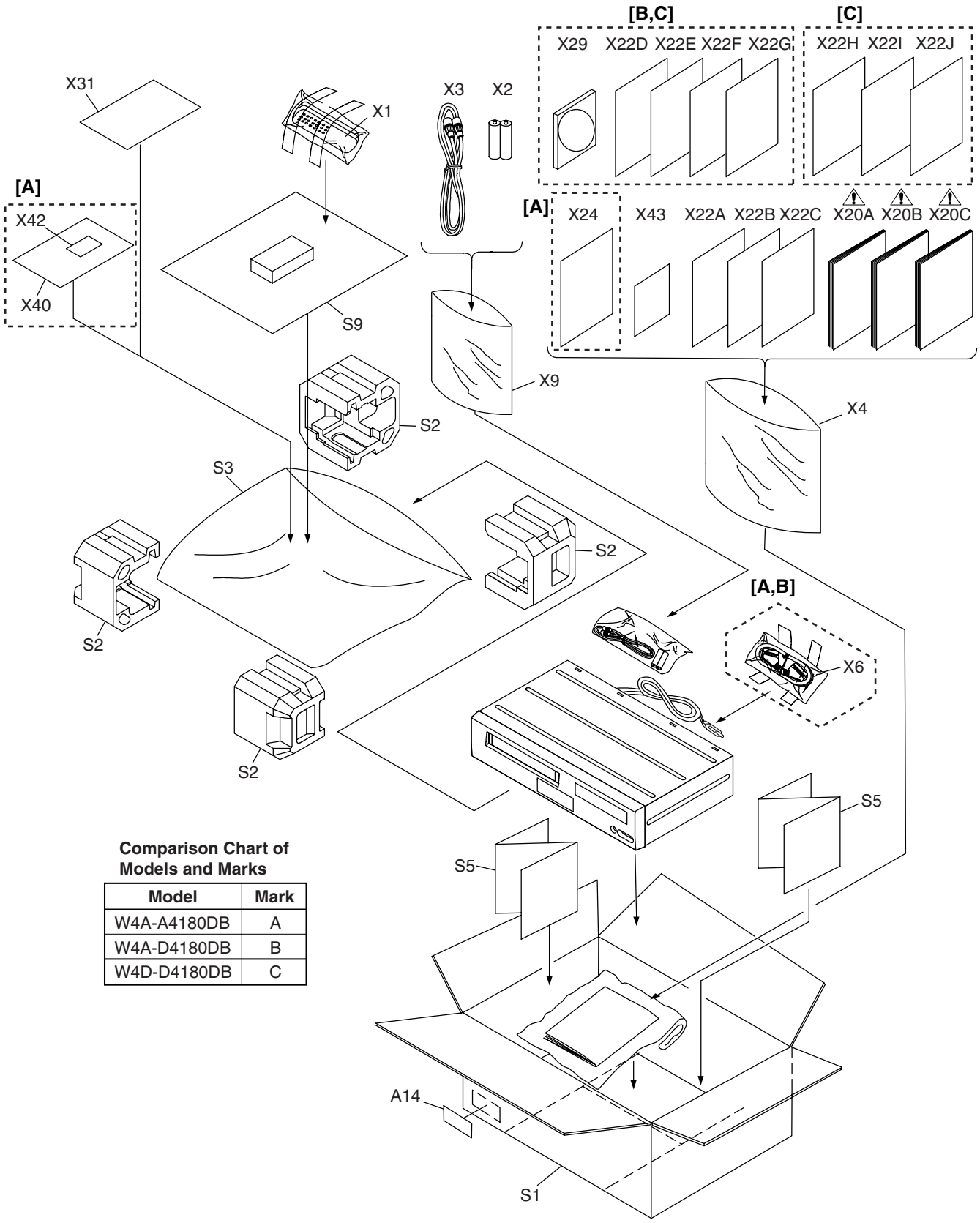


EXPLODED VIEWS

Cabinet



Packing



Comparison Chart of Models and Marks

Model	Mark
W4A-A4180DB	A
W4A-D4180DB	B
W4D-D4180DB	C

MECHANICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTE: Parts that are not assigned part numbers (---------) are not available.

Comparison Chart of Models and Marks

Model	Mark
W4A-A4180DB	A
W4A-D4180DB	B
W4D-D4180DB	C

Ref. No.	Mark	Description	Part No.
A1X		FRONT ASSEMBLY E9G00ED	1VM223076
A2		TOP COVER E9G00ED	1VM223085
A3		MAIN CHASSIS E9400UD	0VM101353H
A4		REAR PANEL E9G00ED	1VM223073
A10⚠	A	RATING LABEL E9G00ED	---------
A10⚠	B	RATING LABEL E9G03ED	---------
A10⚠	C	RATING LABEL E9G04ED	---------
A14		BARCODE LABEL UNFIGURE E9704ED	---------
A14	A	BARCODE LABEL E9G00ED	---------
A14	B	BARCODE LABEL E9G03ED	---------
A14	C	BARCODE LABEL E9G04ED	---------
A34		FOOT H5100UD	0VM406940A
1B1		DECK ASSEMBLY CZD014/VM25E0	N25E0FL
2B1		DECK PEDESTAL E9600UD	1VM120055G
2B2		FRONT BRACKET E9400UD	0VM204534C
2B3		FRONT BRACKET R E9400UD	0VM416269A
2B4		EARTH PLATE E9H10UD	1VM425084
2B10		PCB HOLDER E9H10UD	1VM121066F
2B13		JACK BRACKET E9400UD	0VM416273
2B31		TAPE HIMELON H9206JD	0VM413956
2B32		DOUBLE SIDE TAPE HB200UD	0VM412870
2B45		DUST COVER(R4 PAL) E9GA0BD	1VM323812A
2B59		JACK EARTH PLATE E9600UD	1VM320623
2B76		RUBBER CUSHION(B) E9B00ED	1VM424744
2B77		RUBBER CUSHION(C) E9B00ED	1VM424745
2B84		FAN HOLDER E9H10UD	1VM323512
2B87		PCB WASHER E9H10UD	1VM425701
2L011		SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI	GBHC3050
2L013		SCREW S-TIGHT M3X6 BIND HEAD+	GBJS3060
2L014		SCREW S-TIGHT M3X6 BIND HEAD+	GBJS3060
2L017		SCREW S-TIGHT M3X8 BIND HEAD+	GBJS3080
2L021		SCREW P-TIGHT M3X8 BIND HEAD+	GBCP3080
2L022		SCREW S-TIGHT M3X6 BIND HEAD+	GBJS3060
2L030		SCREW P-TIGHT M3X8 BIND HEAD+	GBJP3080
2L033		SCREW S-TIGHT M3X6 BIND HEAD+	GBJS3060
2L043		SCREW P-TIGHT M3X8 BIND HEAD+	GBJP3080
2L044		SCREW S-TIGHT M3X8 BIND HEAD+	GBJS3080
2L045		SCREW P-TIGHT M3X8 BIND HEAD+	GBJP3080
2L052		SCREW P-TIGHT M3X6 BIND HEAD+	GBJP3060
2L054		SCREW P-TIGHT M3X6 BIND HEAD+	GBJP3060
2L061		SCREW P-TIGHT M3X6 BIND HEAD+	GBJP3060
2L062		SCREW B-TIGHT M3X8 BIND HEAD+	GBHB3080
2L071		SCREW P-TIGHT M3*10 WASHERHEAD+	GCJP3100
2L075		SCREW P-TIGHT M3X8 BIND HEAD+ BLK	GBHP3080
2L081		S-TIGHT SCREW M3X6 BIND HEAD+BLACK	GBHS3060
2L082		S-TIGHT SCREW M3X6 BIND HEAD+BLACK	GBHS3060
2L083		SCREW P-TIGHT M3X8 BIND HEAD+ BLK	GBHP3080
2L111		SCREW P-TIGHT 3X14 BIND HEAD +	GBJP3140
FM1001		MOTOR DC FAN 2D65BK100100	MMEZR12XNR01
		PACKING	
S1	A	GIFT BOX CARTON E9G00ED	1VM323976
S1	B	GIFT BOX CARTON E9G03ED	1VM323980
S1	C	GIFT BOX CARTON E9G04ED	1VM323981
S2		SIDE PAD E9700ED	1VM120081B
S3		SET BAG E7708UA	0DM400731D
S5		PAD E9GA0BD	1VM425619
S9		TOP PAD E9B00ED	1VM323207
		ACCESSORIES	
X1		REMOTE CONTROL UNIT NB617ED	NB617ED
X2		DRY BATTERY R6P/2S or	XB0M451T0001
		DRY BATTERY ES-GR6M-C or	XB0M571GLP01
		DRY BATTERY R6UW/2S	XB0M311MS001
X3		RF CORD PAL 1.2M or	WPZ0122LG001
		RF CABLE CC1001020012010	WPZ0122LW001
X4		ACCESSORY BAG E5700UD	0VM415576
X6	A,B	WIRE ASSEMBLY SCART CABLE CE1013020121410	WX1E8G00-111
X9		REMOCON BAG E9704ED	1VM422101
X20A⚠	A	OWNERS MANUAL(GER) E9G00ED	1VMN23719
X20A⚠	B	OWNERS MANUAL(SP) E9G03ED	1VMN23735
X20A⚠	C	OWNERS MANUAL(EN) E9G04ED	1VMN23741
X20B⚠	A	OWNERS MANUAL(ITA) E9G00ED	1VMN23720
X20B⚠	B	OWNERS MANUAL(SW) E9G03ED	1VMN23736
X20B⚠	C	OWNERS MANUAL(DE) E9G04ED	1VMN23742
X20C⚠	A	OWNERS MANUAL(GRE) E9G00ED	1VMN23721
X20C⚠	B	OWNERS MANUAL(GE) E9G03ED	1VMN23737
X20C⚠	C	OWNERS MANUAL(PL) E9G04ED	1VMN23743
X22A	A	QUICK GUIDE(GER) E9G00ED	1VMN23722
X22A	B	QUICK GUIDE(SP) E9G03ED	1VMN23738
X22A	C	QUICK GUIDE(EN) E9G04ED	1VMN23744
X22B	A	QUICK GUIDE(ITA) E9G00ED	1VMN23723
X22B	B	QUICK GUIDE(SW) E9G03ED	1VMN23739
X22B	C	QUICK GUIDE(DE) E9G04ED	1VMN23745
X22C	A	QUICK GUIDE(GRE) E9G00ED	1VMN23724
X22C	B	QUICK GUIDE(GE) E9G03ED	1VMN23740
X22C	C	QUICK GUIDE(PL) E9G04ED	1VMN23746
X22D	B	QUICK GUIDE(NO) E9G03ED	1VMN23747
X22D	C	QUICK GUIDE(HU) E9G04ED	1VMN23750
X22E	B	QUICK GUIDE(POR) E9G03ED	1VMN23748
X22E	C	QUICK GUIDE(SK) E9G04ED	1VMN23751
X22F	B	QUICK GUIDE(DA) E9G03ED	1VMN23749
X22F	C	QUICK GUIDE(RU) E9G04ED	1VMN23752
X22G	B	QUICK GUIDE(FI) E9G03ED	1VMN23757
X22G	C	QUICK GUIDE(AR) E9G04ED	1VMN23753
X22H	C	QUICK GUIDE(CS) E9G04ED	1VMN23754
X22I	C	QUICK GUIDE(RO) E9G04ED	1VMN23755
X22J	C	QUICK GUIDE(BG) E9G04ED	1VMN23756
X24	A	SERVICE CENTER LIST HC2C0ED	0VMN03071D
X29	B	OWNERS MANUAL CD-ROM E9G03ED	1VM323956
X29	C	OWNERS MANUAL CD-ROM E9G04ED	1VM323957
X31	A,B	HANDBILL E8G00ED	1VMN23494
X31	C	HANDBILL E8G04ED	1VMN23558
X40	A	WARRANTY CARD E9G00ED	1VMN23725
X42	A	LABEL SERIAL NO. E5705JD	---------
X43		POST CARD E8G00ED	1VMN23493

ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTES:

1. Parts that are not assigned part numbers (---------) are not available.
2. Tolerance of Capacitors and Resistors are noted with the following symbols.

C.....±0.25% D.....±0.5% F.....±1%

G.....±2% J.....±5% K.....±10%

M.....±20% N.....±30% Z.....+80/-20%

Comparison Chart of Models and Marks

Model	Mark
W4A-A4180DB	A
W4A-D4180DB	B
W4D-D4180DB	C

DVD MECHANISM & DVD MAIN CBA ASSEMBLY

Ref. No.	Mark	Description	Part No.
1B2	A,B	DVD MECHANISM & DVD MAIN CBA ASSEMBLY	N78GADEN
1B2	C	DVD MECHANISM & DVD MAIN CBA ASSEMBLY	N78GDDEN

MCV CBA

Ref. No.	Mark	Description	Part No.
	A B C	MCV CBA MCV CBA MCV CBA Consists of the following	1VSA16000 1VSA16003 1VSA16005
		MAIN CBA (MCV-A) POWER SW CBA (MCV-B) FUNCTION CBA (MCV-C) FRONT JACK CBA (MCV-D) SENSOR CBA	--------- --------- --------- --------- 1VSA11699

MAIN CBA

Ref. No.	Mark	Description	Part No.
		MAIN CBA (MCV-A) Consists of the following:	---------
		CAPACITORS	
C251		ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMAVSL100
		CAP ELECTROLYTIC 10µF/16V/M/H7	CA1C100ENE10
C252		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C253		CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C254		ELECTROLYTIC CAP. 1µF/50V M H7 or	CE1JMAVSL1R0
		CAP ELECTROLYTIC 1µF/50V/M/H7	CA1J1R0ENE10
C301		CHIP CERAMIC CAP.(1608) B K 0.022µF/ 50V	CHD1JK30B223
C302		ELECTROLYTIC CAP. 1µF/50V M H7 or	CE1JMAVSL1R0
		CAP ELECTROLYTIC 1µF/50V/M/H7	CA1J1R0ENE10
C303		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C305		ELECTROLYTIC CAP. 1µF/50V M H7 or	CE1JMAVSL1R0
		CAP ELECTROLYTIC 1µF/50V/M/H7	CA1J1R0ENE10
C306		CHIP CERAMIC CAP.(1608) B K 0.047µF/ 50V	CHD1JK30B473
C307		CHIP CERAMIC CAP.(1608) B K 0.022µF/ 50V	CHD1JK30B223
C308		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C311		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C312		ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMAVSL100
		CAP ELECTROLYTIC 10µF/16V/M/H7	CA1C100ENE10
C313		ELECTROLYTIC CAP. 1µF/50V M H7 or	CE1JMASSL1R0
		CAP ELECTROLYTIC 1µF/50V/M/H7	CA1J1R0ENE09
C314		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C315		CHIP CERAMIC CAP.(1608) B K 0.047µF/ 50V	CHD1JK30B473
C316		ELECTROLYTIC CAP. 1µF/50V M H7 or	CE1JMAVSL1R0
		CAP ELECTROLYTIC 1µF/50V/M/H7	CA1J1R0ENE10
C317		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C318	C	CHIP CERAMIC CAP.(1608) B K 0.022µF/ 50V	CHD1JK30B223
C322		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C324		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C325		CHIP CERAMIC CAP. B K 8200pF/50V	CHD1JK30B822
C326		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C328		ELECTROLYTIC CAP. 47µF/6.3V M H7 or	CE0KMAVSL470
		CAP ELECTROLYTIC 47µF/6.3V/M/H7	CA0K470ENE10
C329		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C330		ELECTROLYTIC CAP. 100µF/16V M or	CE1CMASDL101
		CAP ELECTROLYTIC 100µF/16V/M	CA1C101ENE12
C331		ELECTROLYTIC CAP. 220µF/6.3V M or	CE0KMASDL221
		CAP ELECTROLYTIC 220µF/6.3V/M	CA0K221ENE12
C333		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C334		ELECTROLYTIC CAP. 1µF/50V M H7 or	CE1JMAVSL1R0
		CAP ELECTROLYTIC 1µF/50V/M/H7	CA1J1R0ENE10
C335		ELECTROLYTIC CAP. 100µF/6.3V H7 or	CE0KMAVSL101
		CAP ELECTROLYTIC 100µF/6.3V/M/H7	CA0K101ENE10
C336		CHIP CERAMIC CAP. CH J 220pF/50V	CHD1JJ3CH221
C337		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C339		CHIP CERAMIC CAP. CH J 120pF/50V	CHD1JJ3CH121
C340		ELECTROLYTIC CAP. 1µF/50V M H7 or	CE1JMAVSL1R0
		CAP ELECTROLYTIC 1µF/50V/M/H7	CA1J1R0ENE10
C341		CHIP CERAMIC CAP.(1608) CH D 10pF/ 50V	CHD1JD3CH100
C342		CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C343		ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMAVSL100
		CAP ELECTROLYTIC 10µF/16V/M/H7	CA1C100ENE10
C344		ELECTROLYTIC CAP. 4.7µF/25V M NP H7 or	CP1EMAVSB4R7
		CAP ELECTROLYTIC 4.7µF/25V/M/H7/ NP	CA1E4R7ENE07
C345		ELECTROLYTIC CAP. 0.47µF/50V M H7 or	CE1JMAVSLR47
		CAP ELECTROLYTIC 0.47µF/50V/M/H7	CA1JR47ENE10
C347		CHIP CERAMIC CAP.(1608) B K 0.1µF/ 25V	CHD1EK30B104
C349		ELECTROLYTIC CAP. 0.47µF/50V M H7 or	CE1JMAVSLR47
		CAP ELECTROLYTIC 0.47µF/50V/M/H7	CA1JR47ENE10
C350		CERAMIC CAP.(AX) F Z 0.1µF/50V	CCA1JZTFZ104
C402		FILM CAP.(P) 0.018µF/50V J or	CA1J183MS029
		FILM CAP.(P) 0.018µF/100V J	CMA2AJP00183

Ref. No.	Mark	Description	Part No.
C403		CERAMIC CAP. B K 470pF/100V	CCD2AKS0B471
C404		ELECTROLYTIC CAP. 220µF/6.3V M H7 or	CE0KMASSL221
		CAP ELECTROLYTIC 220µF/6.3V/M/H7	CA0K221ENE09
C405		ELECTROLYTIC CAP. 47µF/6.3V M H7 or	CE0KMAVSL470
		CAP ELECTROLYTIC 47µF/6.3V/M/H7	CA0K470ENE10
C407		CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C408		CHIP CERAMIC CAP. B K 1800pF/50V	CHD1JK30B182
C409		CHIP CERAMIC CAP.(1608) CH J 33pF/ 50V	CHD1JJ3CH330
C410		ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMAVSL100
		CAP ELECTROLYTIC 10µF/16V/M/H7	CA1C100ENE10
C411		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C412		ELECTROLYTIC CAP. 33µF/6.3V M H7 or	CE0KMAVSL330
		CAP ELECTROLYTIC 33µF/6.3V/M/H7	CA0K330ENE10
C413		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C414		CHIP CERAMIC CAP.(1608) B K 0.022µF/ 50V	CHD1JK30B223
C415		ELECTROLYTIC CAP. 4.7µF/25V M H7 or	CE1EMAVSL4R7
		CAP ELECTROLYTIC 4.7µF/25V/M/H7	CA1E4R7ENE10
C416		CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V	CHD1JK30B472
C417		ELECTROLYTIC CAP. 22µF/6.3V M H7 or	CE0KMAVSL220
		CAP ELECTROLYTIC 22µF/6.3V/M/H7	CA0K220ENE10
C418		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C419		CHIP CERAMIC CAP. CH J 220pF/50V	CHD1JJ3CH221
C421		ELECTROLYTIC CAP. 47µF/6.3V M H7 or	CE0KMAVSL470
		CAP ELECTROLYTIC 47µF/6.3V/M/H7	CA0K470ENE10
C451		CHIP CERAMIC CAP.(1608) CH J 22pF/ 50V	CHD1JJ3CH220
C452		ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMAVSL100
		CAP ELECTROLYTIC 10µF/16V/M/H7	CA1C100ENE10
C453		ELECTROLYTIC CAP. 22µF/10V M H7 or	CE1AMAVSL220
		CAP ELECTROLYTIC 22µF/10V/M/H7	CA1A220ENE10
C454		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C455		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C456		ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMAVSL100
		CAP ELECTROLYTIC 10µF/16V/M/H7	CA1C100ENE10
C457		ELECTROLYTIC CAP. 4.7µF/25V M H7 or	CE1EMAVSL4R7
		CAP ELECTROLYTIC 4.7µF/25V/M/H7	CA1E4R7ENE10
C458		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C461		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C462		CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V	CHD1JK30B472
C463		ELECTROLYTIC CAP. 22µF/10V M H7 or	CE1AMAVSL220
		CAP ELECTROLYTIC 22µF/10V/M/H7	CA1A220ENE10
C464		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C465		ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMAVSL100
		CAP ELECTROLYTIC 10µF/16V/M/H7	CA1C100ENE10
C466		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C467		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C468		ELECTROLYTIC CAP. 220µF/6.3V M H7 or	CE0KMAVSL221
		CAP ELECTROLYTIC 220µF/6.3V/M/H7	CA0K221ENE10
C469		ELECTROLYTIC CAP. 22µF/10V M H7 or	CE1AMAVSL220
		CAP ELECTROLYTIC 22µF/10V/M/H7	CA1A220ENE10
C470		CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V	CHD1JK30B472
C471		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C472		ELECTROLYTIC CAP. 4.7µF/25V M H7 or	CE1EMAVSL4R7
		CAP ELECTROLYTIC 4.7µF/25V/M/H7	CA1E4R7ENE10
C473		ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMAVSL100

Ref. No.	Mark	Description	Part No.
		CAP ELECTROLYTIC 10µF/16V/M/H7	CA1C100ENE10
C474		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C475		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C476		ELECTROLYTIC CAP. 22µF/6.3V M H7 or	CE0KMAVSL220
		CAP ELECTROLYTIC 22µF/6.3V/M/H7	CA0K220ENE10
C477		CHIP CERAMIC CAP.(1608) CH J 22pF/ 50V	CHD1JJ3CH220
C478		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C479		ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMAVSL100
		CAP ELECTROLYTIC 10µF/16V/M/H7	CA1C100ENE10
C480		ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMAVSL100
		CAP ELECTROLYTIC 10µF/16V/M/H7	CA1C100ENE10
C481		ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMAVSL100
		CAP ELECTROLYTIC 10µF/16V/M/H7	CA1C100ENE10
C482		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C483		ELECTROLYTIC CAP. 4.7µF/25V M H7 or	CE1EMAVSL4R7
		CAP ELECTROLYTIC 4.7µF/25V/M/H7	CA1E4R7ENE10
C484		ELECTROLYTIC CAP. 4.7µF/25V M H7 or	CE1EMAVSL4R7
		CAP ELECTROLYTIC 4.7µF/25V/M/H7	CA1E4R7ENE10
C485		ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMAVSL100
		CAP ELECTROLYTIC 10µF/16V/M/H7	CA1C100ENE10
C486		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C487		ELECTROLYTIC CAP. 47µF/16V M H7 or	CE1CMAVSL470
		CAP ELECTROLYTIC 47µF/16V/M/H7	CA1C470ENE10
C488		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C502		CHIP CERAMIC CAP.(1608) B K 0.022µF/ 50V	CHD1JK30B223
C505		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C506		ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1µF/50V/M	CA1J1R0ENE12
C507		CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C508		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C509		CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C510		CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V	CHD1JK30B472
C511		CHIP CERAMIC CAP.(1608) CH J 100pF/ 50V	CHD1JJ3CH101
C513		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C514		CHIP CERAMIC CAP. B K 330pF/50V	CHD1JK30B331
C515		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C516		ELECTROLYTIC CAP. 22µF/6.3V M H7 or	CE0KMAVSL220
		CAP ELECTROLYTIC 22µF/6.3V/M/H7	CA0K220ENE10
C517		CERAMIC CAP.(AX) F Z 0.022µF/25V	CCA1EZTFZ223
C518		ELECTROLYTIC CAP. 22µF/6.3V M H7 or	CE0KMAVSL220
		CAP ELECTROLYTIC 22µF/6.3V/M/H7	CA0K220ENE10
C519		CHIP CERAMIC CAP. CH J 560pF/50V	CHD1JJ3CH561
C521		ELECTROLYTIC CAP. 22µF/6.3V M H7 or	CE0KMAVSL220
		CAP ELECTROLYTIC 22µF/6.3V/M/H7	CA0K220ENE10
C522		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C524		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C526		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C527		CERAMIC CAP.(AX) B K 100pF/50V	CCA1JKT0B101
C531		CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V	CHD1JK30B472
C533		CHIP CERAMIC CAP.(1608) B K 0.047µF/ 50V	CHD1JK30B473
C534		ELECTROLYTIC CAP. 47µF/6.3V M H7 or	CE0KMAVSL470
		CAP ELECTROLYTIC 47µF/6.3V/M/H7	CA0K470ENE10
C535		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104

Ref. No.	Mark	Description	Part No.
C536	C	CHIP CERAMIC CAP. CH J 560pF/50V	CHD1JJ3CH561
C538		CHIP CERAMIC CAP. CH J 180pF/50V	CHD1JJ3CH181
C539		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C540		CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V	CHD1JK30B472
C541		CHIP CERAMIC CAP. CH J 18pF/50V	CHD1JJ3CH180
C542		CHIP CERAMIC CAP. CH J 18pF/50V	CHD1JJ3CH180
C543		CHIP CERAMIC CAP.(1608) CH J 22pF/ 50V	CHD1JJ3CH220
C544		CHIP CERAMIC CAP.(1608) CH J 22pF/ 50V	CHD1JJ3CH220
C545		CHIP CERAMIC CAP.(1608) CH J 22pF/ 50V	CHD1JJ3CH220
C546		CHIP CERAMIC CAP.(1608) CH J 22pF/ 50V	CHD1JJ3CH220
C547		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C548		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C549		ELECTROLYTIC CAP. 1µF/50V M H7 or	CE1JMAVSL1R0
		CAP ELECTROLYTIC 1µF/50V/M/H7	CA1J1R0ENE10
C550		ELECTROLYTIC CAP. 100µF/6.3V H7 or	CE0KMAVSL101
		CAP ELECTROLYTIC 100µF/6.3V/M/H7	CA0K101ENE10
C553		ELECTROLYTIC CAP. 22µF/10V M H7 or	CE1AMAVSL220
		CAP ELECTROLYTIC 22µF/10V/M/H7	CA1A220ENE10
C554		ELECTROLYTIC CAP. 100µF/6.3V H7 or	CE0KMAVSL101
		CAP ELECTROLYTIC 100µF/6.3V/M/H7	CA0K101ENE10
C555		CHIP CERAMIC CAP.(1608) B K 0.1µF/ 25V	CHD1EK30B104
C560		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C611		ELECTROLYTIC CAP. 22µF/50V M H7 or	CE1JMASSL220
		CAP ELECTROLYTIC 22µF/50V/M/H7	CA1J220ENE09
C612		CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V	CHD1JK30B472
C614		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C615		ELECTROLYTIC CAP. 100µF/6.3V H7 or	CE0KMAVSL101
		CAP ELECTROLYTIC 100µF/6.3V/M/H7	CA0K101ENE10
C616		CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C1500		ELECTROLYTIC CAP. 47µF/16V M or	CE1CMASDL470
		CAP ELECTROLYTIC 47µF/16V/M	CA1C470ENE12
C1501		ELECTROLYTIC CAP. 47µF/6.3V M or	CE0KMASDL470
		CAP ELECTROLYTIC 47µF/6.3V/M	CA0K470ENE12
C1502		ELECTROLYTIC CAP. 47µF/6.3V M H7 or	CE0KMAVSL470
		CAP ELECTROLYTIC 47µF/6.3V/M/H7	CA0K470ENE10
C1503		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C1506		ELECTROLYTIC CAP. 47µF/16V M or	CE1CMASDL470
		CAP ELECTROLYTIC 47µF/16V/M	CA1C470ENE12
C1507		ELECTROLYTIC CAP. 10µF/16V M or	CE1CMASDL100
		CAP ELECTROLYTIC 10µF/16V/M	CA1C100ENE12
C1508		CERAMIC CAP.(AX) B K 0.1µF/25V	CCA1EKT0B104
C1509		ELECTROLYTIC CAP. 10µF/16V M or	CE1CMASDL100
		CAP ELECTROLYTIC 10µF/16V/M	CA1C100ENE12
C1510		ELECTROLYTIC CAP. 10µF/16V M or	CE1CMASDL100
		CAP ELECTROLYTIC 10µF/16V/M	CA1C100ENE12
C1511		ELECTROLYTIC CAP. 220µF/16V M or	CE1CMASDL221
		CAP ELECTROLYTIC 220µF/16V/M	CA1C221ENE12
C1512		ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMAVSL100
		CAP ELECTROLYTIC 10µF/16V/M/H7	CA1C100ENE10
C1513		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1517		ELECTROLYTIC CAP. 47µF/16V M or	CE1CMASDL470
		CAP ELECTROLYTIC 47µF/16V/M	CA1C470ENE12
C1518		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1519		CHIP CERAMIC CAP. F Z 1µF/10V	CHD1AZ30F105
C1520		CHIP CERAMIC CAP. F Z 1µF/10V	CHD1AZ30F105
C1521		CHIP CERAMIC CAP. F Z 1µF/10V	CHD1AZ30F105

Ref. No.	Mark	Description	Part No.
C1524		CHIP CERAMIC CAP.(1608) B K 0.1µF/ 25V	CHD1EK30B104
C1525		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C1526		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1527		ELECTROLYTIC CAP. 47µF/25V M or	CE1EMASDL470
		CAP ELECTROLYTIC 47µF/25V/M	CA1E470ENE12
C1528		ELECTROLYTIC CAP. 100µF/16V M or	CE1CMASDL101
		CAP ELECTROLYTIC 100µF/16V/M	CA1C101ENE12
C1529		ELECTROLYTIC CAP. 470µF/6.3V M or	CE0KMASDL471
		CAP ELECTROLYTIC 470µF/6.3V/M	CA0K471ENE12
C1530		ELECTROLYTIC CAP. 22µF/16V M or	CE1CMASDL220
		CAP ELECTROLYTIC 22µF/16V/M	CA1C220ENE12
C1532		ELECTROLYTIC CAP. 10µF/16V M or	CE1CMASDL100
		CAP ELECTROLYTIC 10µF/16V/M	CA1C100ENE12
C1533		ELECTROLYTIC CAP. 100µF/6.3V M or	CE0KMASDL101
		CAP ELECTROLYTIC 100µF/6.3V/M	CA0K101ENE12
C1534		ELECTROLYTIC CAP. 100µF/6.3V H7 or	CE0KMAVSL101
		CAP ELECTROLYTIC 100µF/6.3V/M/H7	CA0K101ENE10
C1535		ELECTROLYTIC CAP. 10µF/16V M or	CE1CMASDL100
		CAP ELECTROLYTIC 10µF/16V/M	CA1C100ENE12
C1536		ELECTROLYTIC CAP. 10µF/16V M or	CE1CMASDL100
		CAP ELECTROLYTIC 10µF/16V/M	CA1C100ENE12
C1537		ELECTROLYTIC CAP. 220µF/6.3V M H7 or	CE0KMASSL221
		CAP ELECTROLYTIC 220µF/6.3V/M/H7	CA0K221ENE09
C1538		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1539		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1540		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1541		ELECTROLYTIC CAP. 100µF/6.3V M H7 or	CE0KMASSL101
		CAP ELECTROLYTIC 100µF/6.3V/M/H7	CA0K101ENE09
C1542		ELECTROLYTIC CAP. 100µF/16V M or	CE1CMASDL101
		CAP ELECTROLYTIC 100µF/16V/M	CA1C101ENE12
C1543		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1544		ELECTROLYTIC CAP. 47µF/6.3V M H7 or	CE0KMAVSL470
		CAP ELECTROLYTIC 47µF/6.3V/M/H7	CA0K470ENE10
C1546		CHIP CERAMIC CAP. F Z 0.01µF/50V	CHD1JZ30F103
C1547		ELECTROLYTIC CAP. 47µF/16V M or	CE1CMASDL470
		CAP ELECTROLYTIC 47µF/16V/M	CA1C470ENE12
C1548		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1549		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1550		ELECTROLYTIC CAP. 100µF/6.3V M NP or	CP0KMASNC101
		CAP ELECTROLYTIC 100µF/6.3V/M/NP	CA0K101ENE04
C1551		CHIP CERAMIC CAP.(1608) CH J 33pF/ 50V	CHD1JJ3CH330
C1552		CHIP CERAMIC CAP.(1608) CH J 33pF/ 50V	CHD1JJ3CH330
C1553		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1554		ELECTROLYTIC CAP. 10µF/16V M or	CE1CMASDL100
		CAP ELECTROLYTIC 10µF/16V/M	CA1C100ENE12
C1555		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1556		ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMAVSL100
		CAP ELECTROLYTIC 10µF/16V/M/H7	CA1C100ENE10
C1557		ELECTROLYTIC CAP. 47µF/16V M or	CE1CMASDL470
		CAP ELECTROLYTIC 47µF/16V/M	CA1C470ENE12
C1558		CHIP CERAMIC CAP.(1608) CH J 100pF/ 50V	CHD1JJ3CH101
C1560		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1563		ELECTROLYTIC CAP. 100µF/16V M or	CE1CMASDL101
		CAP ELECTROLYTIC 100µF/16V/M	CA1C101ENE12
C1564		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104

Ref. No.	Mark	Description	Part No.
C1565		ELECTROLYTIC CAP. 100µF/6.3V M or	CE0KMASDL101
		CAP ELECTROLYTIC 100µF/6.3V/M	CA0K101ENE12
C1566		ELECTROLYTIC CAP. 10µF/16V M or	CE1CMASDL100
		CAP ELECTROLYTIC 10µF/16V/M	CA1C100ENE12
C1567		ELECTROLYTIC CAP. 47µF/16V M or	CE1CMASDL470
		CAP ELECTROLYTIC 47µF/16V/M	CA1C470ENE12
C1569		ELECTROLYTIC CAP. 470µF/6.3V M or	CE0KMASDL471
		CAP ELECTROLYTIC 470µF/6.3V/M	CA0K471ENE12
C1572		ELECTROLYTIC CAP. 10µF/16V M or	CE1CMASDL100
		CAP ELECTROLYTIC 10µF/16V/M	CA1C100ENE12
C1573		ELECTROLYTIC CAP. 10µF/16V M or	CE1CMASDL100
		CAP ELECTROLYTIC 10µF/16V/M	CA1C100ENE12
C1576		CHIP CERAMIC CAP.(1608) CH J 470pF/ 50V	CHD1JJ3CH471
C1577		CHIP CERAMIC CAP.(1608) CH J 470pF/ 50V	CHD1JJ3CH471
C1578		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C1580		ELECTROLYTIC CAP. 22µF/16V M or	CE1CMASDL220
		CAP ELECTROLYTIC 22µF/16V/M	CA1C220ENE12
C1581		ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1µF/50V/M	CA1J1R0ENE12
C1582		ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1µF/50V/M	CA1J1R0ENE12
C1583		ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1µF/50V/M	CA1J1R0ENE12
C1584		ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1µF/50V/M	CA1J1R0ENE12
C1585		ELECTROLYTIC CAP. 100µF/6.3V M or	CE0KMASDL101
		CAP ELECTROLYTIC 100µF/6.3V/M	CA0K101ENE12
C1586		CHIP CERAMIC CAP.(1608) CH J 68pF/ 50V	CHD1JJ3CH680
C1587		ELECTROLYTIC CAP. 100µF/6.3V M or	CE0KMASDL101
		CAP ELECTROLYTIC 100µF/6.3V/M	CA0K101ENE12
C1588		CHIP CERAMIC CAP.(1608) CH J 68pF/ 50V	CHD1JJ3CH680
C1589		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1590		ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1µF/50V/M	CA1J1R0ENE12
C1591		ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1µF/50V/M	CA1J1R0ENE12
C1592		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C1593		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C1594		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1595		ELECTROLYTIC CAP. 22µF/16V M H7 or	CE1CMAVSL220
		CAP ELECTROLYTIC 22µF/16V/M/H7	CA1C220ENE10
C1596		ELECTROLYTIC CAP. 22µF/16V M or	CE1CMASDL220
		CAP ELECTROLYTIC 22µF/16V/M	CA1C220ENE12
C1597		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C1598		ELECTROLYTIC CAP. 1µF/50V M H7 or	CE1JMAVSL1R0
		CAP ELECTROLYTIC 1µF/50V/M/H7	CA1J1R0ENE10
C1599		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1600		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1601		ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMAVSL100
		CAP ELECTROLYTIC 10µF/16V/M/H7	CA1C100ENE10
C1602		ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMAVSL100
		CAP ELECTROLYTIC 10µF/16V/M/H7	CA1C100ENE10
C1605		ELECTROLYTIC CAP. 470µF/6.3V M or	CE0KMASDL471
		CAP ELECTROLYTIC 470µF/6.3V/M	CA0K471ENE12
C1606		ELECTROLYTIC CAP. 470µF/6.3V M or	CE0KMASDL471
		CAP ELECTROLYTIC 470µF/6.3V/M	CA0K471ENE12
C1607		ELECTROLYTIC CAP. 470µF/6.3V M or	CE0KMASDL471
		CAP ELECTROLYTIC 470µF/6.3V/M	CA0K471ENE12
C1609		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104

Ref. No.	Mark	Description	Part No.
C1612		ELECTROLYTIC CAP. 100µF/6.3V H7 or	CE0KMAVSL101
		CAP ELECTROLYTIC 100µF/6.3V/M/H7	CA0K101ENE10
C1613		CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C1614		ELECTROLYTIC CAP. 470µF/6.3V M or	CE0KMASDL471
		CAP ELECTROLYTIC 470µF/6.3V/M	CA0K471ENE12
C1615		ELECTROLYTIC CAP. 470µF/6.3V M or	CE0KMASDL471
		CAP ELECTROLYTIC 470µF/6.3V/M	CA0K471ENE12
C1616		ELECTROLYTIC CAP. 470µF/6.3V M or	CE0KMASDL471
		CAP ELECTROLYTIC 470µF/6.3V/M	CA0K471ENE12
C1617		CHIP CERAMIC CAP.(1608) B K 0.1µF/ 25V	CHD1EK30B104
C1618		ELECTROLYTIC CAP. 470µF/6.3V M or	CE0KMASDL471
		CAP ELECTROLYTIC 470µF/6.3V/M	CA0K471ENE12
C1619		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1620		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C1621		ELECTROLYTIC CAP. 10µF/50V M or	CE1JMASDL100
		CAP ELECTROLYTIC 10µF/50V/M	CA1J100ENE12
C1623		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C1626		CHIP CERAMIC CAP. F Z 0.22µF/16V	CHD1CZ30F224
C1627		CHIP CERAMIC CAP. F Z 0.22µF/16V	CHD1CZ30F224
C1628		CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
C1629		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1630		CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V	CHD1JK30B103
C1631		CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C1632		CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
C1633		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1634		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1635		ELECTROLYTIC CAP. 0.33µF/50V M or	CE1JMASDLR33
		CAP ELECTROLYTIC 0.33µF/50V/M	CA1JR33ENE12
C1636		ELECTROLYTIC CAP. 100µF/6.3V M or	CE0KMASDL101
		CAP ELECTROLYTIC 100µF/6.3V/M	CA0K101ENE12
C1637		ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1µF/50V/M	CA1J1R0ENE12
C1639		CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
C1640		CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
C1643		ELECTROLYTIC CAP. 47µF/6.3V M or	CE0KMASDL470
		CAP ELECTROLYTIC 47µF/6.3V/M	CA0K470ENE12
C1645		CHIP CERAMIC CAP.(1608) CH J 68pF/ 50V	CHD1JJ3CH680
C1646		ELECTROLYTIC CAP. 22µF/16V M or	CE1CMASDL220
		CAP ELECTROLYTIC 22µF/16V/M	CA1C220ENE12
C1648		CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
C1649		CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
C1651		CHIP CERAMIC CAP.(1608) CH J 68pF/ 50V	CHD1JJ3CH680
C1652		CHIP CERAMIC CAP.(1608) F Z 0.1µF/ 50V	CHD1JZ30F104
C1655		CHIP CERAMIC CAP. CH J 12pF/50V	CHD1JJ3CH120
C1657		ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1µF/50V/M	CA1J1R0ENE12
C1658		CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C1659		ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1µF/50V/M	CA1J1R0ENE12
C1660		CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C1661		ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1µF/50V/M	CA1J1R0ENE12
C1662		ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1µF/50V/M	CA1J1R0ENE12
C1663		CHIP CERAMIC CAP.(1608) B K 0.1µF/ 25V	CHD1EK30B104
C1664		ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1µF/50V/M	CA1J1R0ENE12

Ref. No.	Mark	Description	Part No.
C1665		CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C1671		ELECTROLYTIC CAP. 4.7μF/25V M or	CE1EMASDL4R7
		CAP ELECTROLYTIC 4.7μF/25V/M	CA1E4R7ENE12
C1672		ELECTROLYTIC CAP. 4.7μF/25V M or	CE1EMASDL4R7
		CAP ELECTROLYTIC 4.7μF/25V/M	CA1E4R7ENE12
C1673		ELECTROLYTIC CAP. 47μF/16V M or	CE1CMASDL470
		CAP ELECTROLYTIC 47μF/16V/M	CA1C470ENE12
C1675		ELECTROLYTIC CAP. 47μF/25V M or	CE1EMASDL470
		CAP ELECTROLYTIC 47μF/25V/M	CA1E470ENE12
C1677		CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C1680		CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C1681		ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1μF/50V/M	CA1J1R0ENE12
C1684		ELECTROLYTIC CAP. 4.7μF/25V M or	CE1EMASDL4R7
		CAP ELECTROLYTIC 4.7μF/25V/M	CA1E4R7ENE12
C1685		ELECTROLYTIC CAP. 4.7μF/25V M or	CE1EMASDL4R7
		CAP ELECTROLYTIC 4.7μF/25V/M	CA1E4R7ENE12
C1686		ELECTROLYTIC CAP. 4.7μF/25V M or	CE1EMASDL4R7
		CAP ELECTROLYTIC 4.7μF/25V/M	CA1E4R7ENE12
C1687		ELECTROLYTIC CAP. 4.7μF/25V M or	CE1EMASDL4R7
		CAP ELECTROLYTIC 4.7μF/25V/M	CA1E4R7ENE12
C1688		ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1μF/50V/M	CA1J1R0ENE12
C1689		ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1μF/50V/M	CA1J1R0ENE12
C1691		CHIP CERAMIC CAP.(1608) CH J 47pF/ 50V	CHD1JJ3CH470
C1692		ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
		CAP ELECTROLYTIC 470μF/6.3V/M	CA0K471ENE12
C1693		ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
		CAP ELECTROLYTIC 470μF/6.3V/M	CA0K471ENE12
C1694		CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZ30F105
C1695		ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1μF/50V/M	CA1J1R0ENE12
C1696		ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1μF/50V/M	CA1J1R0ENE12
C1697		ELECTROLYTIC CAP. 4.7μF/25V M or	CE1EMASDL4R7
		CAP ELECTROLYTIC 4.7μF/25V/M	CA1E4R7ENE12
C1698		ELECTROLYTIC CAP. 4.7μF/25V M or	CE1EMASDL4R7
		CAP ELECTROLYTIC 4.7μF/25V/M	CA1E4R7ENE12
C1699		CHIP CERAMIC CAP.(1608) CH J 47pF/ 50V	CHD1JJ3CH470
C1700		CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZ30F105
C1701		ELECTROLYTIC CAP. 10μF/16V M H7 or	CE1CMAVSL100
		CAP ELECTROLYTIC 10μF/16V/M/H7	CA1C100ENE10
C1702		ELECTROLYTIC CAP. 10μF/16V M H7 or	CE1CMAVSL100
		CAP ELECTROLYTIC 10μF/16V/M/H7	CA1C100ENE10
CONNECTORS			
CN1503		PH CONNECTOR (WHITE) TOP 2P B2B-PH-K-S(LF)	J3PHC02JG017
CN1504		CONNECTOR FFC 34P IMSA-9615S-34A-PP-A	JC96J34ER007
CN1505		FE CONNECTOR TOP 8P 08FE-BT-VK-N	JCFEJ08JG001
CN1506	A	AFV PCB ASSEMBLY E3B00ED	E3B00AFV
CN1506	B,C	AFV PCB ASSEMBLY E3B01BD	E3B01AFV
DIODES			
D301		SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
		DIODE SWITCHING 1N4148-F0021 or	NDTZ01N4148F
		SWITCHING DIODE 1N4148M	NDTZ01N4148M
D502		LED(GREEN) 204-10GD/S957	NPQZ10GDS957
D503		LED(GREEN) 204-10GD/S957	NPQZ10GDS957
D509		SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
		DIODE SWITCHING 1N4148-F0021 or	NDTZ01N4148F
		SWITCHING DIODE 1N4148M	NDTZ01N4148M
D510		SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
		DIODE SWITCHING 1N4148-F0021 or	NDTZ01N4148F

Ref. No.	Mark	Description	Part No.
		SWITCHING DIODE 1N4148M	NDTZ01N4148M
D511		ZENER DIODE MTZJT-777.5A or	QDTA0MTZJ7R5
		DIODE ZENER 7V5BSA-T26 or	NDTA7R5BST26
		ZENER DIODE DZ-7.5BSAT265	NDTA0DZ7R5BS
D512		SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
		DIODE SWITCHING 1N4148-F0021 or	NDTZ01N4148F
		SWITCHING DIODE 1N4148M	NDTZ01N4148M
D555		LED MIE-534A2 or	NPZZM1E534A2
		LED SIR-563ST3F P or	QPQPS1R563ST
		LED SIR-563ST3F Q	QPQQS1R563ST
D1501		DIODE 1N5397-B or	NDLZ001N5397
		DIODE RECTIFIER IN5397 or	NDLZ01N5397S
		DIODE 1N5397BD	NDL1001N5397
D1502		DIODE 1N5397-B or	NDLZ001N5397
		DIODE RECTIFIER IN5397 or	NDLZ01N5397S
		DIODE 1N5397BD	NDL1001N5397
D1503		RECTIFIER DIODE 1N4005 or	NDQZ001N4005
		DIODE RECTIFIER 1N4005 or	NDLZ01N4005S
		RECTIFIER DIODE 1N4005	NDWZ001N4005
D1506		SCHOTTKY BARRIER DIODE SB140 or	NDQZ000SB140
		DIODE SCHOTTKY SB140 or	NDLZ00SB140S
		SCHOTTKY BARRIER DIODE SB140	NDWZ000SB140
D1507		RECTIFIER DIODE 1N4005 or	NDQZ001N4005
		DIODE RECTIFIER 1N4005 or	NDLZ01N4005S
		RECTIFIER DIODE 1N4005	NDWZ001N4005
D1508		ZENER DIODE MTZJT-774.3C or	QDTC0MTZJ4R3
		DIODE ZENER 4V3BSC-T26 or	NDTC4R3BST26
		ZENER DIODE DZ-4.3BSCT265	NDTC0DZ4R3BS
D1511		ZENER DIODE MTZJT-7710B or	QDTB00MTZJ10
		DIODE ZENER 10BSB-T26 or	NDTB010BST26
		ZENER DIODE DZ-10BSBT265	NDTB00DZ10BS
D1512		SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
		DIODE SWITCHING 1N4148-F0021 or	NDTZ01N4148F
		SWITCHING DIODE 1N4148M	NDTZ01N4148M
D1513		SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
		DIODE SWITCHING 1N4148-F0021 or	NDTZ01N4148F
		SWITCHING DIODE 1N4148M	NDTZ01N4148M
D1516		SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
		DIODE SWITCHING 1N4148-F0021 or	NDTZ01N4148F
		SWITCHING DIODE 1N4148M	NDTZ01N4148M
D1517		SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
		DIODE SWITCHING 1N4148-F0021 or	NDTZ01N4148F
		SWITCHING DIODE 1N4148M	NDTZ01N4148M
D1518		ZENER DIODE DZ-18BSBT265 or	NDTB00DZ18BS
		ZENER DIODE MTZJT-7718B or	QDTB00MTZJ18
		DIODE ZENER 18BSB-T26	NDTB018BST26
D1519		ZENER DIODE MTZJT-7711B or	QDTB00MTZJ11
		DIODE ZENER 11BSB-T26 or	NDTB011BST26
		ZENER DIODE DZ-11BSBT265	NDTB00DZ11BS
D1521		SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
		DIODE SWITCHING 1N4148-F0021 or	NDTZ01N4148F
		SWITCHING DIODE 1N4148M	NDTZ01N4148M
D1523		ZENER DIODE MTZJT-775.6B or	QDTB0MTZJ5R6
		DIODE ZENER 5V6BSB-T26 or	NDTB5R6BST26
		ZENER DIODE DZ-5.6BSBT265	NDTB0DZ5R6BS
D1525		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D1526		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D1528		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D1529		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS

Ref. No.	Mark	Description	Part No.
D1531		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D1532		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D1534		ZENER DIODE MTZJT-7733B or	QDTB00MTZJ33
		DIODE ZENER 33BSB-T26 or	NDTB033BST26
		ZENER DIODE DZ-33BSBT265	NDTB00DZ33BS
D1535		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D1537		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D1538		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D1539		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D1540		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D1542		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D1548		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D1549		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
ICS			
IC301		IC Y/C/A LA71750EM-MPB-E	QSZBA0RSY020
IC451		IC HIFI LA72648M-MPB-E	QSZBA0RSY033
IC501		IC SYSCON M3776AMCH-AG1GP	QSZAA0RHT150
IC612		VFD DRIVER IC PT6315(L)	NSZBA0RG2009
IC1501		IC SWITCH 4052L-S16-R/SOP-16 or	NSZBA0TUTC03
		IC SWITCH HCF4052M013TR/SOP/16 or	NSZBA0TSS301
		IC SWITCHING CD4052BNSR or	NSZBA0TTY091
		IC SWITCHING TC4052BF(ELNF)	QSZBA0TTS162
IC1504		VOLTAGE REGULATOR PQ070XF01SZH or	QSZBA0SSH054
		IC VOLTAGE REGULATOR PQ070XFC1SZF / 4PIN	QSZBA0RSH083
IC1505		VOLTAGE REGULATOR PQ070XF01SZH or	QSZBA0SSH054
		IC VOLTAGE REGULATOR PQ070XFC1SZF / 4PIN	QSZBA0RSH083
IC1506		IC OP AMP UTC4580 DIP-8 8PIN or	NSZBA0S2H003
		IC OP AMP RC4580IP	NSZBA0STY173
IC1507		VIDEO SWITCH MM1697AJBE	QSZBA0TMM150
IC1508		IC SWITCH 4053L-S16-R or	NSZBA0TUTC04
		IC ANALOG MULTIPLEXERS HCF4053M013TR or	NSZBA0SSS002
		IC ANALOG MULTIPLEXER CD4053BNSR or	NSZBA0TTY093
		IC SWITCH TC4053BF(EL N F)	QSZBA0TTS163
IC1509		IC SWITCH 4053L-S16-R or	NSZBA0TUTC04
		IC ANALOG MULTIPLEXERS HCF4053M013TR or	NSZBA0SSS002
		IC ANALOG MULTIPLEXER CD4053BNSR or	NSZBA0TTY093
		IC SWITCH TC4053BF(EL N F)	QSZBA0TTS163
IC1510		IC SWITCH 4053L-S16-R or	NSZBA0TUTC04
		IC ANALOG MULTIPLEXERS HCF4053M013TR or	NSZBA0SSS002
		IC ANALOG MULTIPLEXER CD4053BNSR or	NSZBA0TTY093
		IC SWITCH TC4053BF(EL N F)	QSZBA0TTS163

Ref. No.	Mark	Description	Part No.
IC1513		IC OP AMP KIA4558P/P or	NSZBA0SJY035
		IC OP AMP UTC4558	NSZBA0S2H001
IC1514		DRIVER FOR DVD MM1637XVBE	QSZBA0TMM102
IC1515		DRIVER FOR DVD MM1636XWRE	QSZBA0TMM108
IC1516		DRIVER FOR DVD MM1637XVBE	QSZBA0TMM102
IC1518		AV SWITCH MM1443XJBE	QSZBA0TMM152
COILS			
L251		INDUCTOR 5.6μH-K-26T	LLAXKATTU5R6
L302		INDUCTOR(100μH K) LAP02TA101K	LLAXKATTU101
L402		INDUCTOR 47μH-K-5FT	LLARKBSTU470
L451		INDUCTOR 47μH-K-5FT	LLARKBSTU470
L452		PCB JUMPER D0.6-P5.0	JW5.0T
L501		INDUCTOR(100μH K) LAP02TA101K	LLAXKATTU101
L502		PCB JUMPER D0.6-P5.0	JW5.0T
L503		INDUCTOR 1.8μH-K-26T	LLAXKATTU1R8
L1501		RADIAL TYPE CHOKE COIL CW68-470K-841040NP or	LLBD00PKV023
		CHOKE COIL 47μH or	LLBD00PKV022
		CHOKE COIL 47μH-K	LLBD00PKT001
L1503		PCB JUMPER D0.6-P5.0	JW5.0T
L1504		PCB JUMPER D0.6-P5.0	JW5.0T
L1505		INDUCTOR(100μH K) LAP02TA101K	LLAXKATTU101
L1506		PCB JUMPER D0.6-P5.0	JW5.0T
L1507		RADIAL TYPE CHOKE COIL CW68-470K-841040NP or	LLBD00PKV023
		CHOKE COIL 47μH or	LLBD00PKV022
		CHOKE COIL 47μH-K	LLBD00PKT001
L1508		INDUCTOR 10μH-K-26T	LLAXKATTU100
L1509		INDUCTOR(100μH K) LAP02TA101K	LLAXKATTU101
L1510		RADIAL TYPE CHOKE COIL CW68-470K-841040NP or	LLBD00PKV023
		CHOKE COIL 47μH or	LLBD00PKV022
		CHOKE COIL 47μH-K	LLBD00PKT001
L1513		INDUCTOR(0.47μH K) LAP02TAR47K	LLAXKATTUR47
L1515		BEAD CORE ASSEMBLY E9GA0BD	1VSA15806
L1517		PCB JUMPER D0.6-P5.0	JW5.0T
TRANSISTORS			
Q301		TRANSISTOR KTA-1266-GR-AT/P or	NQS4KTA1266P
		TRANSISTOR 2SA1015-GR(TE2 F T)	QQS12SA1015F
Q302		TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
		TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
		TRANSISTOR 2SC1815-Y(TE2 F T) or	QQSY2SC1815F
		TRANSISTOR 2SC1815-GR(TE2 F T)	QQS12SC1815F
Q401		CHIP TRANSISTOR RN1511(TE85R.F) or	QQ2Z0RN1511F
		CHIP TRANSISTOR FMG4A T148	QQ2Z000FMG4A
Q403		TRANSISTOR KTC3203-Y-AT/P or	NQSYKTC3203P
		TRANSISTOR 2SC2120-Y(TE2 F T)	QQSY2SC2120F
Q404		TRANSISTOR KTA-1266-GR-AT/P or	NQS4KTA1266P
		TRANSISTOR 2SA1015-GR(TE2 F T)	QQS12SA1015F
Q405		RES. BUILT-IN TRANSISTOR KRA103M-AT/P or	NQSZ0KRA103M
		TRANSISTOR RN2203(TE4 F T)	QQSZ0RN2203F
Q406		CHIP TRANSISTOR KTC3875S-Y-RTK/P	NQ1YKTC3875S
Q451		TRANSISTOR KRC103S-RTK/P	NQ1ZKRC103SP
Q506		PHOTO TRANSISTOR PT204-6B-12 or	NPWZT2046B12
		PHOTO TRANSISTOR MID-32A22F	NPWZ1D32A22F
Q513		NPN TRANSISTOR KRC103M-AT/P or	NQSZKRC103MP
		NPN TRANSISTOR RES.-IN RN1203(TE4 F T)	QQSZ0RN1203F
Q514		TRANSISTOR KTC3199-BL-AT/P or	NQS5KTC3199P
		TRANSISTOR 2SC1815-BL(TE2 F T)	QQS22SC1815F
Q515		TRANSISTOR KTC3199-BL-AT/P or	NQS5KTC3199P
		TRANSISTOR 2SC1815-BL(TE2 F T)	QQS22SC1815F
Q516		CHIP TRANSISTOR KTC3875S-GR-RTK/P or	NQ14KTC3875S
		CHIP TRANSISTOR 2SC3928A-T112-1Z or	QQ1Z2SC3928A
		CHIP TRANSISTOR 2SC2412K T146Z	QQ1Z2SC2412K

Ref. No.	Mark	Description	Part No.
Q517		CHIP TRANSISTOR KTC3875S-GR-RTK/P or	NQ14KTC3875S
		CHIP TRANSISTOR 2SC3928A-T112-1Z or	QQ1Z2SC3928A
		CHIP TRANSISTOR 2SC2412K T146Z	QQ1Z2SC2412K
Q518		NPN TRANSISTOR KRC103M-AT/P or	NQSZKRC103MP
		NPN TRANSISTOR RES.-IN RN1203(TE4 F T)	QQSZ0RN1203F
Q519		NPN TRANSISTOR KRC103M-AT/P or	NQSZKRC103MP
		NPN TRANSISTOR RES.-IN RN1203(TE4 F T)	QQSZ0RN1203F
Q1501		TRANSISTOR KTA1267-Y-AT/P or	NQSYKTA1267P
		TRANSISTOR KTA1267-GR-AT/P	NQS1KTA1267P
Q1502		NPN TRANSISTOR KRC103M-AT/P or	NQSZKRC103MP
		NPN TRANSISTOR RES.-IN RN1203(TE4 F T)	QQSZ0RN1203F
Q1507		TRANSISTOR KTA-1266-GR-AT/P or	NQS4KTA1266P
		TRANSISTOR 2SA1015-GR(TE2 F T)	QQS12SA1015F
Q1508		TRANSISTOR KTA1281Y-AT/P or	NQVYKTA1281P
		TRANSISTOR 2SA1020-Y(TE6 F M)	QQSY2SA1020F
Q1509		NPN TRANSISTOR KRC103M-AT/P or	NQSZKRC103MP
		NPN TRANSISTOR RES.-IN RN1203(TE4 F T)	QQSZ0RN1203F
Q1510		TRANSISTOR KTC3205-Y-AT/P or	NQSYKTC3205P
		TRANSISTOR 2SC3266-Y(TPE2 F)	QQSY2SC3266F
Q1511		TRANSISTOR KTA1273-Y-AT/P or	NQSYKTA1273P
		TRANSISTOR 2SA966-Y(TE6 F M)	QQSY02SA966F
Q1512		TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
		TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
		TRANSISTOR 2SC1815-Y(TE2 F T) or	QQSY2SC1815F
		TRANSISTOR 2SC1815-GR(TE2 F T)	QQS12SC1815F
Q1513		TRANSISTOR KTA1267-Y-AT/P or	NQSYKTA1267P
		TRANSISTOR KTA1267-GR-AT/P	NQS1KTA1267P
Q1514		TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
		TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
		TRANSISTOR 2SC1815-Y(TE2 F T) or	QQSY2SC1815F
		TRANSISTOR 2SC1815-GR(TE2 F T)	QQS12SC1815F
Q1515		TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
		TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
		TRANSISTOR 2SC1815-Y(TE2 F T) or	QQSY2SC1815F
		TRANSISTOR 2SC1815-GR(TE2 F T)	QQS12SC1815F
Q1516		RES. BUILT-IN TRANSISTOR KRA104M-AT/P or	NQSZ0KRA104M
		TRANSISTOR RN2204(TE4 F T)	QQSZ0RN2204F
Q1517		NPN TRANSISTOR KRC103M-AT/P or	NQSZKRC103MP
		NPN TRANSISTOR RES.-IN RN1203(TE4 F T)	QQSZ0RN1203F
Q1518		TRANSISTOR KTC3205-Y-AT/P or	NQSYKTC3205P
		TRANSISTOR 2SC3266-Y(TPE2 F)	QQSY2SC3266F
Q1519		NPN TRANSISTOR KRC103M-AT/P or	NQSZKRC103MP
		NPN TRANSISTOR RES.-IN RN1203(TE4 F T)	QQSZ0RN1203F
Q1520		TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
		TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
		TRANSISTOR 2SC1815-Y(TE2 F T) or	QQSY2SC1815F
		TRANSISTOR 2SC1815-GR(TE2 F T)	QQS12SC1815F
Q1521		TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
		TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
		TRANSISTOR 2SC1815-Y(TE2 F T) or	QQSY2SC1815F
		TRANSISTOR 2SC1815-GR(TE2 F T)	QQS12SC1815F
Q1522		TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
		TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
		TRANSISTOR 2SC1815-Y(TE2 F T) or	QQSY2SC1815F
		TRANSISTOR 2SC1815-GR(TE2 F T)	QQS12SC1815F
Q1524		TRANSISTOR KRC103S-RTK/P	NQ1ZKRC103SP
Q1525		TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
		TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
		TRANSISTOR 2SC1815-Y(TE2 F T) or	QQSY2SC1815F
		TRANSISTOR 2SC1815-GR(TE2 F T)	QQS12SC1815F
Q1527		TRANSISTOR KRC103S-RTK/P	NQ1ZKRC103SP
Q1528		TRANSISTOR KRC103S-RTK/P	NQ1ZKRC103SP
Q1529		TRANSISTOR KRC103S-RTK/P	NQ1ZKRC103SP
Q1530		CHIP TRANSISTOR KTC3875S-Y-RTK/P	NQ1YKTC3875S
Q1531		TRANSISTOR KRC103S-RTK/P	NQ1ZKRC103SP
Q1532		TRANSISTOR KTA-1266-GR-AT/P or	NQS4KTA1266P
		TRANSISTOR 2SA1015-GR(TE2 F T)	QQS12SA1015F
Q1533		TRANSISTOR KTC3879-Y-RTK/P	NQ1YKTC3879P
Q1534		TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
		TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
		TRANSISTOR 2SC1815-Y(TE2 F T) or	QQSY2SC1815F
		TRANSISTOR 2SC1815-GR(TE2 F T)	QQS12SC1815F
Q1537		TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
		TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
		TRANSISTOR 2SC1815-Y(TE2 F T) or	QQSY2SC1815F
		TRANSISTOR 2SC1815-GR(TE2 F T)	QQS12SC1815F
Q1538		TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
		TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
		TRANSISTOR 2SC1815-Y(TE2 F T) or	QQSY2SC1815F
		TRANSISTOR 2SC1815-GR(TE2 F T)	QQS12SC1815F
Q1539		TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
		TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
		TRANSISTOR 2SC1815-Y(TE2 F T) or	QQSY2SC1815F
		TRANSISTOR 2SC1815-GR(TE2 F T)	QQS12SC1815F
Q1540		TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
		TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
		TRANSISTOR 2SC1815-Y(TE2 F T) or	QQSY2SC1815F
		TRANSISTOR 2SC1815-GR(TE2 F T)	QQS12SC1815F
Q1542		TRANSISTOR KTC3198-Y-AT/P or	NQSYKTC3198P
		TRANSISTOR KTC3198-GR-AT/P	NQS4KTC3198P
RESISTORS			
R251		CHIP RES. 1/10W J 39k Ω or	RRXAJR5Z0393
		RES CHIP 1608 1/10W J 39k Ω	RRXA393YF002
R252		CHIP RES. 1/10W J 2.2k Ω or	RRXAJR5Z0222
		RES CHIP 1608 1/10W J 2.2k Ω	RRXA222YF002
R301		CHIP RES. 1/10W J 1.2k Ω or	RRXAJR5Z0122
		RES CHIP 1608 1/10W J 1.2k Ω	RRXA122YF002
R303		CHIP RES. 1/10W J 5.6k Ω or	RRXAJR5Z0562
		RES CHIP 1608 1/10W J 5.6k Ω	RRXA562YF002
R305		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R308	C	CHIP RES. 1/10W J 3.9k Ω or	RRXAJR5Z0392
	C	RES CHIP 1608 1/10W J 3.9k Ω	RRXA392YF002
R310		PCB JUMPER D0.6-P5.0	JW5.0T
R312	C	CHIP RES. 1/10W J 5.6k Ω or	RRXAJR5Z0562
	C	RES CHIP 1608 1/10W J 5.6k Ω	RRXA562YF002
R314		CHIP RES. 1/10W J 3.9k Ω or	RRXAJR5Z0392
		RES CHIP 1608 1/10W J 3.9k Ω	RRXA392YF002
R316		CHIP RES. 1/10W J 1.8k Ω or	RRXAJR5Z0182
		RES CHIP 1608 1/10W J 1.8k Ω	RRXA182YF002
R319		CHIP RES. 1/10W J 1k Ω or	RRXAJR5Z0102
		RES CHIP 1608 1/10W J 1.0k Ω	RRXA102YF002
R320		CHIP RES. 1/10W J 47k Ω or	RRXAJR5Z0473
		RES CHIP 1608 1/10W J 47k Ω	RRXA473YF002
R321		CHIP RES. 1/10W J 150 Ω or	RRXAJR5Z0151
		RES CHIP 1608 1/10W J 150 Ω	RRXA151YF002
R322		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R323		CHIP RES. 1/10W J 2.2k Ω or	RRXAJR5Z0222
		RES CHIP 1608 1/10W J 2.2k Ω	RRXA222YF002
R324		CHIP RES. 1/10W J 150 Ω or	RRXAJR5Z0151
		RES CHIP 1608 1/10W J 150 Ω	RRXA151YF002
R325		CHIP RES. 1/10W J 1.2k Ω or	RRXAJR5Z0122
		RES CHIP 1608 1/10W J 1.2k Ω	RRXA122YF002
R326		CHIP RES. 1/10W J 4.7k Ω or	RRXAJR5Z0472
		RES CHIP 1608 1/10W J 4.7k Ω	RRXA472YF002
R327		CHIP RES. 1/10W J 6.8k Ω or	RRXAJR5Z0682
		RES CHIP 1608 1/10W J 6.8k Ω	RRXA682YF002

Ref. No.	Mark	Description	Part No.
R328		CHIP RES. 1/10W J 1k Ω or	RRXAJR5Z0102
		RES CHIP 1608 1/10W J 1.0k Ω	RRXA102YF002
R330		CHIP RES. 1/10W J 2.2k Ω or	RRXAJR5Z0222
		RES CHIP 1608 1/10W J 2.2k Ω	RRXA222YF002
R331		CHIP RES. 1/10W J 18k Ω or	RRXAJR5Z0183
		RES CHIP 1608 1/10W J 18k Ω	RRXA183YF002
R332		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R333		CHIP RES. 1/10W J 18k Ω or	RRXAJR5Z0183
		RES CHIP 1608 1/10W J 18k Ω	RRXA183YF002
R334		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R335		CHIP RES. 1/10W J 100 Ω or	RRXAJR5Z0101
		RES CHIP 1608 1/10W J 100 Ω	RRXA101YF002
R336		CHIP RES. 1/10W J 4.7k Ω or	RRXAJR5Z0472
		RES CHIP 1608 1/10W J 4.7k Ω	RRXA472YF002
R337		CHIP RES. 1/10W J 6.8k Ω or	RRXAJR5Z0682
		RES CHIP 1608 1/10W J 6.8k Ω	RRXA682YF002
R345		CHIP RES. 1/10W J 220 Ω or	RRXAJR5Z0221
		RES CHIP 1608 1/10W J 220 Ω	RRXA221YF002
R346		CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R401		CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R402		CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
		CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R404		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
		RES CHIP 1608 1/10W J 0 Ω	RRXA000YF002
R405		CHIP RES. 1/10W J 47k Ω or	RRXAJR5Z0473
		RES CHIP 1608 1/10W J 47k Ω	RRXA473YF002
R406		CHIP RES. 1/10W J 22k Ω or	RRXAJR5Z0223
		RES CHIP 1608 1/10W J 22k Ω	RRXA223YF002
R407		CHIP RES. 1/10W J 5.6k Ω or	RRXAJR5Z0562
		RES CHIP 1608 1/10W J 5.6k Ω	RRXA562YF002
R408		CHIP RES. 1/10W J 12k Ω or	RRXAJR5Z0123
		RES CHIP 1608 1/10W J 12k Ω	RRXA123YF002
R409		CHIP RES. 1/10W J 5.6k Ω or	RRXAJR5Z0562
		RES CHIP 1608 1/10W J 5.6k Ω	RRXA562YF002
R410		CHIP RES. 1/10W J 1k Ω or	RRXAJR5Z0102
		RES CHIP 1608 1/10W J 1.0k Ω	RRXA102YF002
R411		CHIP RES. 1/10W J 27k Ω or	RRXAJR5Z0273
		RES CHIP 1608 1/10W J 27k Ω	RRXA273YF002
R412		CHIP RES. 1/10W J 120 Ω or	RRXAJR5Z0121
		RES CHIP 1608 1/10W J 120 Ω	RRXA121YF002
R413		CHIP RES. 1/10W J 330k Ω or	RRXAJR5Z0334
		RES CHIP 1608 1/10W J 330k Ω	RRXA334YF002
R414		CHIP RES. 1/10W J 12k Ω or	RRXAJR5Z0123
		RES CHIP 1608 1/10W J 12k Ω	RRXA123YF002
R415		CHIP RES. 1/10W J 1.8k Ω or	RRXAJR5Z0182
		RES CHIP 1608 1/10W J 1.8k Ω	RRXA182YF002
R416		CHIP RES. 1/10W J 560 Ω or	RRXAJR5Z0561
		RES CHIP 1608 1/10W J 560 Ω	RRXA561YF002
R417		CHIP RES. 1/10W J 2.2k Ω or	RRXAJR5Z0222
		RES CHIP 1608 1/10W J 2.2k Ω	RRXA222YF002
R418		CHIP RES. 1/10W J 12k Ω or	RRXAJR5Z0123
		RES CHIP 1608 1/10W J 12k Ω	RRXA123YF002
R419		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R420		CHIP RES. 1/10W J 4.7k Ω or	RRXAJR5Z0472
		RES CHIP 1608 1/10W J 4.7k Ω	RRXA472YF002
R421		CHIP RES. 1/10W J 4.7k Ω or	RRXAJR5Z0472
		RES CHIP 1608 1/10W J 4.7k Ω	RRXA472YF002
R451		CHIP RES. 1/10W J 22k Ω or	RRXAJR5Z0223
		RES CHIP 1608 1/10W J 22k Ω	RRXA223YF002
R452		CHIP RES. 1/10W J 33k Ω or	RRXAJR5Z0333
		RES CHIP 1608 1/10W J 33k Ω	RRXA333YF002
R453		CHIP RES. 1/10W J 5.6k Ω or	RRXAJR5Z0562
		RES CHIP 1608 1/10W J 5.6k Ω	RRXA562YF002
R454		CHIP RES. 1/10W J 39k Ω or	RRXAJR5Z0393

Ref. No.	Mark	Description	Part No.
		RES CHIP 1608 1/10W J 39k Ω	RRXA393YF002
R462		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R463		CHIP RES. 1/10W J 470 Ω or	RRXAJR5Z0471
		RES CHIP 1608 1/10W J 470 Ω	RRXA471YF002
R464		CHIP RES. 1/10W J 3.3k Ω or	RRXAJR5Z0332
		RES CHIP 1608 1/10W J 3.3k Ω	RRXA332YF002
R465		CHIP RES. 1/10W J 22k Ω or	RRXAJR5Z0223
		RES CHIP 1608 1/10W J 22k Ω	RRXA223YF002
R466		CHIP RES. 1/10W J 8.2k Ω or	RRXAJR5Z0822
		RES CHIP 1608 1/10W J 8.2k Ω	RRXA822YF002
R467		CHIP RES. 1/10W J 5.6k Ω or	RRXAJR5Z0562
		RES CHIP 1608 1/10W J 5.6k Ω	RRXA562YF002
R469		CHIP RES. 1/10W J 33k Ω or	RRXAJR5Z0333
		RES CHIP 1608 1/10W J 33k Ω	RRXA333YF002
R470		CHIP RES. 1/10W J 39k Ω or	RRXAJR5Z0393
		RES CHIP 1608 1/10W J 39k Ω	RRXA393YF002
R479		CHIP RES. 1/10W J 33 Ω or	RRXAJR5Z0330
		RES CHIP 1608 1/10W J 33 Ω	RRXA330YF002
R480		CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
		CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R481		CHIP RES. 1/10W J 33 Ω or	RRXAJR5Z0330
		RES CHIP 1608 1/10W J 33 Ω	RRXA330YF002
R482		CHIP RES. 1/10W J 100 Ω or	RRXAJR5Z0101
		RES CHIP 1608 1/10W J 100 Ω	RRXA101YF002
R483		CHIP RES. 1/10W J 22k Ω or	RRXAJR5Z0223
		RES CHIP 1608 1/10W J 22k Ω	RRXA223YF002
R484		CHIP RES. 1/10W J 6.8k Ω or	RRXAJR5Z0682
		RES CHIP 1608 1/10W J 6.8k Ω	RRXA682YF002
R509		CHIP RES. 1/10W J 180 Ω or	RRXAJR5Z0181
		RES CHIP 1608 1/10W J 180 Ω	RRXA181YF002
R510		CHIP RES. 1/10W J 47k Ω or	RRXAJR5Z0473
		RES CHIP 1608 1/10W J 47k Ω	RRXA473YF002
R511		CARBON RES. 1/6W G 3.6k Ω or	RCX6GATZ0362
		CARBON RES. 1/4W G 3.6k Ω	RCX4GATZ0362
R512		CHIP RES. 1/10W J 68k Ω or	RRXAJR5Z0683
		RES CHIP 1608 1/10W J 68k Ω	RRXA683YF002
R513		CHIP RES. 1/10W J 33k Ω or	RRXAJR5Z0333
		RES CHIP 1608 1/10W J 33k Ω	RRXA333YF002
R514		CARBON RES. 1/6W G 10k Ω or	RCX6GATZ0103
		CARBON RES. 1/4W G 10k Ω	RCX4GATZ0103
R516		CARBON RES. 1/6W G 470 Ω or	RCX6GATZ0471
		CARBON RES. 1/4W G 470 Ω	RCX4GATZ0471
R517		CARBON RES. 1/4W J 270 Ω	RCX4JATZ0271
R519		CARBON RES. 1/6W G 22k Ω or	RCX6GATZ0223
		CARBON RES. 1/4W G 22k Ω	RCX4GATZ0223
R523		CARBON RES. 1/6W G 1.5k Ω or	RCX6GATZ0152
		CARBON RES. 1/4W G 1.5k Ω	RCX4GATZ0152
R525		CHIP RES. 1/10W J 390k Ω or	RRXAJR5Z0394
		RES CHIP 1608 1/10W J 390k Ω	RRXA394YF002
R526		CARBON RES. 1/6W J 390k Ω or	RCX6JATZ0394
		CARBON RES. 1/4W J 390k Ω	RCX4JATZ0394
R528		CARBON RES. 1/6W G 4.7k Ω or	RCX6GATZ0472
		CARBON RES. 1/4W G 4.7k Ω	RCX4GATZ0472
R536		CHIP RES. 1/10W J 1.8k Ω or	RRXAJR5Z0182
		RES CHIP 1608 1/10W J 1.8k Ω	RRXA182YF002
R537		CHIP RES. 1/10W J 680 Ω or	RRXAJR5Z0681
		RES CHIP 1608 1/10W J 680 Ω	RRXA681YF002
R539		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R540		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R541		CHIP RES. 1/10W J 18k Ω or	RRXAJR5Z0183
		RES CHIP 1608 1/10W J 18k Ω	RRXA183YF002
R542		CHIP RES. 1/10W J 5.6k Ω or	RRXAJR5Z0562
		RES CHIP 1608 1/10W J 5.6k Ω	RRXA562YF002
R543		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102

Ref. No.	Mark	Description	Part No.
R544		CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R545		CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R546		CHIP RES. 1/10W J 1k Ω or	RRXAJR5Z0102
		RES CHIP 1608 1/10W J 1.0k Ω	RRXA102YF002
R553		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R567		CHIP RES. 1/10W J 39k Ω or	RRXAJR5Z0393
		RES CHIP 1608 1/10W J 39k Ω	RRXA393YF002
R568		CHIP RES. 1/10W J 220k Ω or	RRXAJR5Z0224
		RES CHIP 1608 1/10W J 220k Ω	RRXA224YF002
R569		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R570		CARBON RES. 1/6W J 4.7k Ω or	RCX6JATZ0472
		CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R572		CHIP RES. 1/10W J 1k Ω or	RRXAJR5Z0102
		RES CHIP 1608 1/10W J 1.0k Ω	RRXA102YF002
R574		CHIP RES. 1/10W J 1k Ω or	RRXAJR5Z0102
		RES CHIP 1608 1/10W J 1.0k Ω	RRXA102YF002
R575		CHIP RES. 1/10W J 330k Ω or	RRXAJR5Z0334
		RES CHIP 1608 1/10W J 330k Ω	RRXA334YF002
R576		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R577		CHIP RES. 1/10W J 1.5k Ω or	RRXAJR5Z0152
		RES CHIP 1608 1/10W J 1.5k Ω	RRXA152YF002
R578		CHIP RES. 1/10W J 1k Ω or	RRXAJR5Z0102
		RES CHIP 1608 1/10W J 1.0k Ω	RRXA102YF002
R581		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R582		CHIP RES. 1/10W J 100k Ω or	RRXAJR5Z0104
		RES CHIP 1608 1/10W J 100k Ω	RRXA104YF002
R583		CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R584		CHIP RES. 1/10W J 100 Ω or	RRXAJR5Z0101
		RES CHIP 1608 1/10W J 100 Ω	RRXA101YF002
R585		CHIP RES. 1/10W J 2.2k Ω or	RRXAJR5Z0222
		RES CHIP 1608 1/10W J 2.2k Ω	RRXA222YF002
R586		CHIP RES. 1/10W J 820 Ω or	RRXAJR5Z0821
		RES CHIP 1608 1/10W J 820 Ω	RRXA821YF002
R588		CHIP RES. 1/10W J 470 Ω or	RRXAJR5Z0471
		RES CHIP 1608 1/10W J 470 Ω	RRXA471YF002
R595		CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R596		CARBON RES. 1/6W J 150 Ω or	RCX6JATZ0151
		CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151
R597		CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R598		CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R601		CHIP RES. 1/10W J 1.8k Ω or	RRXAJR5Z0182
		RES CHIP 1608 1/10W J 1.8k Ω	RRXA182YF002
R602		CHIP RES. 1/10W J 1k Ω or	RRXAJR5Z0102
		RES CHIP 1608 1/10W J 1.0k Ω	RRXA102YF002
R603		CHIP RES. 1/10W J 1.2k Ω or	RRXAJR5Z0122
		RES CHIP 1608 1/10W J 1.2k Ω	RRXA122YF002
R604		CHIP RES. 1/10W J 1.5k Ω or	RRXAJR5Z0152
		RES CHIP 1608 1/10W J 1.5k Ω	RRXA152YF002
R605		CHIP RES. 1/10W J 2.2k Ω or	RRXAJR5Z0222
		RES CHIP 1608 1/10W J 2.2k Ω	RRXA222YF002
R606		CHIP RES. 1/10W J 3.9k Ω or	RRXAJR5Z0392
		RES CHIP 1608 1/10W J 3.9k Ω	RRXA392YF002
R607		CHIP RES. 1/10W J 8.2k Ω or	RRXAJR5Z0822
		RES CHIP 1608 1/10W J 8.2k Ω	RRXA822YF002
R608		CHIP RES. 1/10W J 22k Ω or	RRXAJR5Z0223
		RES CHIP 1608 1/10W J 22k Ω	RRXA223YF002
R617		PCB JUMPER D0.6-P5.0	JW5.0T
R618		CHIP RES. 1/10W J 100k Ω or	RRXAJR5Z0104
		RES CHIP 1608 1/10W J 100k Ω	RRXA104YF002
R621		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
		RES CHIP 1608 1/10W J 0 Ω	RRXA000YF002
R622		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
		RES CHIP 1608 1/10W J 0 Ω	RRXA000YF002

Ref. No.	Mark	Description	Part No.
R623		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
		RES CHIP 1608 1/10W J 0 Ω	RRXA000YF002
R624		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R625		CHIP RES. 1/10W J 1.8k Ω or	RRXAJR5Z0182
		RES CHIP 1608 1/10W J 1.8k Ω	RRXA182YF002
R626		CHIP RES. 1/10W J 1k Ω or	RRXAJR5Z0102
		RES CHIP 1608 1/10W J 1.0k Ω	RRXA102YF002
R627		CHIP RES. 1/10W J 1.2k Ω or	RRXAJR5Z0122
		RES CHIP 1608 1/10W J 1.2k Ω	RRXA122YF002
R628		CHIP RES. 1/10W J 1.5k Ω or	RRXAJR5Z0152
		RES CHIP 1608 1/10W J 1.5k Ω	RRXA152YF002
R629		CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R630		CHIP RES. 1/10W J 3.9k Ω or	RRXAJR5Z0392
		RES CHIP 1608 1/10W J 3.9k Ω	RRXA392YF002
R631		CHIP RES. 1/10W J 8.2k Ω or	RRXAJR5Z0822
		RES CHIP 1608 1/10W J 8.2k Ω	RRXA822YF002
R632		CHIP RES. 1/10W J 22k Ω or	RRXAJR5Z0223
		RES CHIP 1608 1/10W J 22k Ω	RRXA223YF002
R643		CHIP RES. 1/10W J 100 Ω or	RRXAJR5Z0101
		RES CHIP 1608 1/10W J 100 Ω	RRXA101YF002
R644		CHIP RES. 1/10W J 100 Ω or	RRXAJR5Z0101
		RES CHIP 1608 1/10W J 100 Ω	RRXA101YF002
R645		CHIP RES. 1/10W J 3.3k Ω or	RRXAJR5Z0332
		RES CHIP 1608 1/10W J 3.3k Ω	RRXA332YF002
R646		CHIP RES. 1/10W J 3.3k Ω or	RRXAJR5Z0332
		RES CHIP 1608 1/10W J 3.3k Ω	RRXA332YF002
R647		CHIP RES. 1/10W J 560 Ω or	RRXAJR5Z0561
		RES CHIP 1608 1/10W J 560 Ω	RRXA561YF002
R648		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R649		CHIP RES. 1/10W J 560 Ω or	RRXAJR5Z0561
		RES CHIP 1608 1/10W J 560 Ω	RRXA561YF002
R650		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R651		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R653		CARBON RES. 1/6W J 2.7k Ω or	RCX6JATZ0272
		CARBON RES. 1/4W J 2.7k Ω	RCX4JATZ0272
R654		CHIP RES. 1/10W J 4.7k Ω or	RRXAJR5Z0472
		RES CHIP 1608 1/10W J 4.7k Ω	RRXA472YF002
R655		CARBON RES. 1/6W J 2.7k Ω or	RCX6JATZ0272
		CARBON RES. 1/4W J 2.7k Ω	RCX4JATZ0272
R656		CHIP RES. 1/10W J 4.7k Ω or	RRXAJR5Z0472
		RES CHIP 1608 1/10W J 4.7k Ω	RRXA472YF002
R657		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R1016		CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R1500		CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R1501		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1502		PCB JUMPER D0.6-P5.0	JW5.0T
R1504		CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R1505		CHIP RES. 1/10W J 5.6k Ω or	RRXAJR5Z0562
		RES CHIP 1608 1/10W J 5.6k Ω	RRXA562YF002
R1507		CHIP RES. 1/10W J 47k Ω or	RRXAJR5Z0473
		RES CHIP 1608 1/10W J 47k Ω	RRXA473YF002
R1510		CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R1512		CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R1513		CARBON RES. 1/6W J 27k Ω or	RCX6JATZ0273
		CARBON RES. 1/4W J 27k Ω	RCX4JATZ0273
R1514		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R1519		PCB JUMPER D0.6-P5.0	JW5.0T
R1522		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1523		CARBON RES. 1/4W J 390 Ω	RCX4JATZ0391
R1524		CARBON RES. 1/6W J 47k Ω or	RCX6JATZ0473
		CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R1525		CARBON RES. 1/6W J 820 Ω or	RCX6JATZ0821
		CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821

Ref. No.	Mark	Description	Part No.
R1526		CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R1527		CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R1528		CHIP RES. 1/10W J 47k Ω or	RRXAJR5Z0473
		RES CHIP 1608 1/10W J 47k Ω	RRXA473YF002
R1529		CARBON RES. 1/6W J 1.5k Ω or	RCX6JATZ0152
		CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R1530		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R1531		CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R1532		CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R1533		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R1536		CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R1537		CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R1538		CARBON RES. 1/4W J 330 Ω	RCX4JATZ0331
R1539		CARBON RES. 1/4W J 1.2k Ω	RCX4JATZ0122
R1540		CHIP RES. 1/10W J 33k Ω or	RRXAJR5Z0333
		RES CHIP 1608 1/10W J 33k Ω	RRXA333YF002
R1541		CHIP RES. 1/10W J 470 Ω or	RRXAJR5Z0471
		RES CHIP 1608 1/10W J 470 Ω	RRXA471YF002
R1543		CHIP RES. 1/10W J 4.7k Ω or	RRXAJR5Z0472
		RES CHIP 1608 1/10W J 4.7k Ω	RRXA472YF002
R1544		CHIP RES. 1/10W J 33k Ω or	RRXAJR5Z0333
		RES CHIP 1608 1/10W J 33k Ω	RRXA333YF002
R1547		CHIP RES. 1/10W J 4.7k Ω or	RRXAJR5Z0472
		RES CHIP 1608 1/10W J 4.7k Ω	RRXA472YF002
R1550		CARBON RES. 1/6W J 4.7k Ω or	RCX6JATZ0472
		CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R1551		CHIP RES. 1/10W F 10k Ω or	RRXAFR5H1002
		CHIP RES. 1/10W F 10k Ω or	RRXAFR5Z1002
		RES CHIP 1608 1/10W F 10.0k Ω	RTW1002YF002
R1552		CHIP RES. 1/10W F 10k Ω or	RRXAFR5H1002
		CHIP RES. 1/10W F 10k Ω or	RRXAFR5Z1002
		RES CHIP 1608 1/10W F 10.0k Ω	RTW1002YF002
R1553		CHIP RES. 1/10W J 47k Ω or	RRXAJR5Z0473
		RES CHIP 1608 1/10W J 47k Ω	RRXA473YF002
R1554		CARBON RES. 1/4W J 27 Ω	RCX4JATZ0270
R1555		CHIP RES. 1/10W J 33k Ω or	RRXAJR5Z0333
		RES CHIP 1608 1/10W J 33k Ω	RRXA333YF002
R1556		CHIP RES. 1/10W F 15k Ω or	RRXAFR5H1502
		CHIP RES. 1/10W F 15k Ω or	RRXAFR5Z1502
		RES CHIP 1608 1/10W F 15.0k Ω	RTW1502YF002
R1557		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R1558		CHIP RES. 1/10W F 4.7k Ω or	RRXAFR5H4701
		CHIP RES.(1608) 1/10W F 4.7k Ω or	RRXAFR5Z4701
		RES CHIP 1608 1/10W F 4.70k Ω	RTW4701YF002
R1559		CHIP RES. 1/10W J 2.2k Ω or	RRXAJR5Z0222
		RES CHIP 1608 1/10W J 2.2k Ω	RRXA222YF002
R1560		CHIP RES. 1/10W J 1.5k Ω or	RRXAJR5Z0152
		RES CHIP 1608 1/10W J 1.5k Ω	RRXA152YF002
R1561		CHIP RES. 1/10W F 820 Ω or	RRXAFR5H8200
		CHIP RES.(1608) 1/10W F 820 Ω or	RRXAFR5Z8200
		RES CHIP 1608 1/10W F 820 Ω	RTW8200YF002
R1562		CHIP RES. 1/10W F 1.5k Ω or	RRXAFR5H1501
		CHIP RES. 1/10W F 1.5k Ω or	RRXAFR5Z1501
		RES CHIP 1608 1/10W F 1.50k Ω	RTW1501YF002
R1563		CHIP RES. 1/10W J 33k Ω or	RRXAJR5Z0333
		RES CHIP 1608 1/10W J 33k Ω	RRXA333YF002
R1564		CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
		CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R1565		CHIP RES. 1/10W J 2.2k Ω or	RRXAJR5Z0222
		RES CHIP 1608 1/10W J 2.2k Ω	RRXA222YF002
R1566		CHIP RES. 1/10W J 6.8k Ω or	RRXAJR5Z0682
		RES CHIP 1608 1/10W J 6.8k Ω	RRXA682YF002
R1567		CHIP RES. 1/10W J 6.8k Ω or	RRXAJR5Z0682
		RES CHIP 1608 1/10W J 6.8k Ω	RRXA682YF002

Ref. No.	Mark	Description	Part No.
R1568		CARBON RES. 1/6W J 3.3k Ω or	RCX6JATZ0332
		CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R1569		CARBON RES. 1/6W J 3.3k Ω or	RCX6JATZ0332
		CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R1570		CARBON RES. 1/6W J 3.3k Ω or	RCX6JATZ0332
		CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R1571		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
		RES CHIP 1608 1/10W J 0 Ω	RRXA000YF002
R1572		CHIP RES. 1/10W J 4.7k Ω or	RRXAJR5Z0472
		RES CHIP 1608 1/10W J 4.7k Ω	RRXA472YF002
R1573		CHIP RES. 1/10W J 4.7k Ω or	RRXAJR5Z0472
		RES CHIP 1608 1/10W J 4.7k Ω	RRXA472YF002
R1574		PCB JUMPER D0.6-P5.0	JW5.0T
R1576		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
		RES CHIP 1608 1/10W J 0 Ω	RRXA000YF002
R1578		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R1579		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R1581		CARBON RES. 1/4W J 8.2k Ω	RCX4JATZ0822
R1582		CARBON RES. 1/4W J 8.2k Ω	RCX4JATZ0822
R1587		CHIP RES. 1/10W J 100k Ω or	RRXAJR5Z0104
		RES CHIP 1608 1/10W J 100k Ω	RRXA104YF002
R1589		CHIP RES. 1/10W J 470 Ω or	RRXAJR5Z0471
		RES CHIP 1608 1/10W J 470 Ω	RRXA471YF002
R1590		CHIP RES. 1/10W J 100k Ω or	RRXAJR5Z0104
		RES CHIP 1608 1/10W J 100k Ω	RRXA104YF002
R1591		CHIP RES. 1/10W J 3k Ω or	RRXAJR5Z0302
		RES CHIP 1608 1/10W J 3.0k Ω	RRXA302YF002
R1592		CHIP RES. 1/10W J 1k Ω or	RRXAJR5Z0102
		RES CHIP 1608 1/10W J 1.0k Ω	RRXA102YF002
R1593		CHIP RES. 1/10W J 12k Ω or	RRXAJR5Z0123
		RES CHIP 1608 1/10W J 12k Ω	RRXA123YF002
R1594		CHIP RES. 1/10W J 3k Ω or	RRXAJR5Z0302
		RES CHIP 1608 1/10W J 3.0k Ω	RRXA302YF002
R1595		CHIP RES. 1/10W J 12k Ω or	RRXAJR5Z0123
		RES CHIP 1608 1/10W J 12k Ω	RRXA123YF002
R1596		CHIP RES. 1/10W J 6.8k Ω or	RRXAJR5Z0682
		RES CHIP 1608 1/10W J 6.8k Ω	RRXA682YF002
R1597		CHIP RES. 1/10W J 150 Ω or	RRXAJR5Z0151
		RES CHIP 1608 1/10W J 150 Ω	RRXA151YF002
R1598		CHIP RES. 1/10W J 150 Ω or	RRXAJR5Z0151
		RES CHIP 1608 1/10W J 150 Ω	RRXA151YF002
R1599		CHIP RES. 1/10W F 220 Ω or	RRXAFR5H2200
		CHIP RES.(1608) 1/10W F 220 Ω or	RRXAFR5Z2200
		RES CHIP 1608 1/10W F 220 Ω	RTW2200YF002
R1600		CHIP RES. 1/10W F 270 Ω or	RRXAFR5H2700
		CHIP RES. 1/10W F 270 Ω or	RRXAFR5Z2700
		RES CHIP 1608 1/10W F 270 Ω	RTW2700YF002
R1603		CHIP RES. 1/10W F 1.1k Ω or	RRXAFR5H1101
		CHIP RES. 1/10W F 1.1k Ω or	RRXAFR5Z1101
		RES CHIP 1608 1/10W F 1.10k Ω	RTW1101YF002
R1604		PCB JUMPER D0.6-P5.0	JW5.0T
R1605		CHIP RES. 1/10W F 220 Ω or	RRXAFR5H2200
		CHIP RES.(1608) 1/10W F 220 Ω or	RRXAFR5Z2200
		RES CHIP 1608 1/10W F 220 Ω	RTW2200YF002
R1606		CHIP RES. 1/10W F 220 Ω or	RRXAFR5H2200
		CHIP RES.(1608) 1/10W F 220 Ω or	RRXAFR5Z2200
		RES CHIP 1608 1/10W F 220 Ω	RTW2200YF002
R1607		CHIP RES. 1/10W J 3.3k Ω or	RRXAJR5Z0332
		RES CHIP 1608 1/10W J 3.3k Ω	RRXA332YF002
R1608		CHIP RES. 1/10W J 150 Ω or	RRXAJR5Z0151
		RES CHIP 1608 1/10W J 150 Ω	RRXA151YF002
R1609		CHIP RES. 1/10W J 150 Ω or	RRXAJR5Z0151
		RES CHIP 1608 1/10W J 150 Ω	RRXA151YF002
R1610		CHIP RES. 1/10W J 470 Ω or	RRXAJR5Z0471
		RES CHIP 1608 1/10W J 470 Ω	RRXA471YF002

Ref. No.	Mark	Description	Part No.
R1611		CHIP RES. 1/10W J 470 Ω or	RRXAJR5Z0471
		RES CHIP 1608 1/10W J 470 Ω	RRXA471YF002
R1612		CHIP RES. 1/10W J 4.7k Ω or	RRXAJR5Z0472
		RES CHIP 1608 1/10W J 4.7k Ω	RRXA472YF002
R1613		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
		RES CHIP 1608 1/10W J 0 Ω	RRXA000YF002
R1616		CHIP RES. 1/10W J 1k Ω or	RRXAJR5Z0102
		RES CHIP 1608 1/10W J 1.0k Ω	RRXA102YF002
R1619		CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R1620		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1630		CHIP RES. 1/10W F 3.6k Ω or	RRXAFR5H3601
		CHIP RES.(1608) 1/10W F 3.6k Ω or	RRXAFR5Z3601
		RES CHIP 1608 1/10W F 3.60k Ω	RTW3601YF002
R1631		CHIP RES. 1/10W F 3.6k Ω or	RRXAFR5H3601
		CHIP RES.(1608) 1/10W F 3.6k Ω or	RRXAFR5Z3601
		RES CHIP 1608 1/10W F 3.60k Ω	RTW3601YF002
R1637		CHIP RES. 1/10W F 11k Ω or	RRXAFR5H1102
		CHIP RES. 1/10W F 11k Ω or	RRXAFR5Z1102
		RES CHIP 1608 1/10W F 11.0k Ω	RTW1102YF002
R1638		CHIP RES. 1/10W F 11k Ω or	RRXAFR5H1102
		CHIP RES. 1/10W F 11k Ω or	RRXAFR5Z1102
		RES CHIP 1608 1/10W F 11.0k Ω	RTW1102YF002
R1639		CHIP RES. 1/10W J 3.3k Ω or	RRXAJR5Z0332
		RES CHIP 1608 1/10W J 3.3k Ω	RRXA332YF002
R1640		CHIP RES. 1/10W J 3.3k Ω or	RRXAJR5Z0332
		RES CHIP 1608 1/10W J 3.3k Ω	RRXA332YF002
R1641		CHIP RES. 1/10W F 820 Ω or	RRXAFR5H8200
		CHIP RES.(1608) 1/10W F 820 Ω or	RRXAFR5Z8200
		RES CHIP 1608 1/10W F 820 Ω	RTW8200YF002
R1642		CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
		RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R1643		CARBON RES. 1/6W J 15k Ω or	RCX6JATZ0153
		CARBON RES. 1/4W J 15k Ω	RCX4JATZ0153
R1644		CHIP RES. 1/10W F 270 Ω or	RRXAFR5H2700
		CHIP RES. 1/10W F 270 Ω or	RRXAFR5Z2700
		RES CHIP 1608 1/10W F 270 Ω	RTW2700YF002
R1647		CHIP RES. 1/10W J 2.2k Ω or	RRXAJR5Z0222
		RES CHIP 1608 1/10W J 2.2k Ω	RRXA222YF002
R1648		CHIP RES. 1/10W J 22k Ω or	RRXAJR5Z0223
		RES CHIP 1608 1/10W J 22k Ω	RRXA223YF002
R1650		CHIP RES. 1/10W J 100k Ω or	RRXAJR5Z0104
		RES CHIP 1608 1/10W J 100k Ω	RRXA104YF002
R1651		CHIP RES. 1/10W J 100k Ω or	RRXAJR5Z0104
		RES CHIP 1608 1/10W J 100k Ω	RRXA104YF002
R1654		CHIP RES. 1/10W J 470 Ω or	RRXAJR5Z0471
		RES CHIP 1608 1/10W J 470 Ω	RRXA471YF002
R1655		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
		RES CHIP 1608 1/10W J 0 Ω	RRXA000YF002
R1656		CHIP RES. 1/10W J 470 Ω or	RRXAJR5Z0471
		RES CHIP 1608 1/10W J 470 Ω	RRXA471YF002
R1658		CHIP RES. 1/10W J 6.8k Ω or	RRXAJR5Z0682
		RES CHIP 1608 1/10W J 6.8k Ω	RRXA682YF002
R1659		CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R1660		CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R1661		CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R1663		CHIP RES. 1/10W J 330 Ω or	RRXAJR5Z0331
		RES CHIP 1608 1/10W J 330 Ω	RRXA331YF002
R1664		CHIP RES. 1/10W J 330 Ω or	RRXAJR5Z0331
		RES CHIP 1608 1/10W J 330 Ω	RRXA331YF002
R1665		PCB JUMPER D0.6-P5.0	JW5.0T
R1666		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1669		CHIP RES. 1/10W J 1.8k Ω or	RRXAJR5Z0182
		RES CHIP 1608 1/10W J 1.8k Ω	RRXA182YF002
R1670		CHIP RES. 1/10W J 2.2k Ω or	RRXAJR5Z0222
		RES CHIP 1608 1/10W J 2.2k Ω	RRXA222YF002
R1671		CHIP RES. 1/10W J 1k Ω or	RRXAJR5Z0102
		RES CHIP 1608 1/10W J 1.0k Ω	RRXA102YF002

Ref. No.	Mark	Description	Part No.
R1672		CHIP RES. 1/10W J 1k Ω or	RRXAJR5Z0102
		RES CHIP 1608 1/10W J 1.0k Ω	RRXA102YF002
R1673		CHIP RES. 1/10W J 2.2k Ω or	RRXAJR5Z0222
		RES CHIP 1608 1/10W J 2.2k Ω	RRXA222YF002
R1676		CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R1677		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1678		CARBON RES. 1/4W J 330 Ω	RCX4JATZ0331
R1679		CHIP RES. 1/10W J 220 Ω or	RRXAJR5Z0221
		RES CHIP 1608 1/10W J 220 Ω	RRXA221YF002
R1680		CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R1681		CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R1682		CHIP RES. 1/10W J 75 Ω or	RRXAJR5Z0750
		RES CHIP 1608 1/10W J 75 Ω	RRXA750YF002
R1683		CHIP RES. 1/10W J 75 Ω or	RRXAJR5Z0750
		RES CHIP 1608 1/10W J 75 Ω	RRXA750YF002
R1684		CHIP RES. 1/10W J 75 Ω or	RRXAJR5Z0750
		RES CHIP 1608 1/10W J 75 Ω	RRXA750YF002
R1685		CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R1686		CHIP RES. 1/10W J 75 Ω or	RRXAJR5Z0750
		RES CHIP 1608 1/10W J 75 Ω	RRXA750YF002
R1687		CHIP RES. 1/10W J 390 Ω or	RRXAJR5Z0391
		RES CHIP 1608 1/10W J 390 Ω	RRXA391YF002
R1688		CHIP RES. 1/10W J 75 Ω or	RRXAJR5Z0750
		RES CHIP 1608 1/10W J 75 Ω	RRXA750YF002
R1689		CHIP RES. 1/10W J 1k Ω or	RRXAJR5Z0102
		RES CHIP 1608 1/10W J 1.0k Ω	RRXA102YF002
R1690		CHIP RES. 1/10W J 1k Ω or	RRXAJR5Z0102
		RES CHIP 1608 1/10W J 1.0k Ω	RRXA102YF002
R1691		CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R1692		CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R1693		CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R1694		CHIP RES. 1/10W J 100k Ω or	RRXAJR5Z0104
		RES CHIP 1608 1/10W J 100k Ω	RRXA104YF002
R1695		CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R1696		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
		RES CHIP 1608 1/10W J 0 Ω	RRXA000YF002
R1697		CHIP RES. 1/10W J 220 Ω or	RRXAJR5Z0221
		RES CHIP 1608 1/10W J 220 Ω	RRXA221YF002
R1698		CHIP RES. 1/10W J 220 Ω or	RRXAJR5Z0221
		RES CHIP 1608 1/10W J 220 Ω	RRXA221YF002
R1699		CHIP RES. 1/10W J 2.2k Ω or	RRXAJR5Z0222
		RES CHIP 1608 1/10W J 2.2k Ω	RRXA222YF002
R1700		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
		RES CHIP 1608 1/10W J 0 Ω	RRXA000YF002
R1702		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
		RES CHIP 1608 1/10W J 0 Ω	RRXA000YF002
R1703		CHIP RES. 1/10W J 470 Ω or	RRXAJR5Z0471
		RES CHIP 1608 1/10W J 470 Ω	RRXA471YF002
R1704		CHIP RES. 1/10W J 22k Ω or	RRXAJR5Z0223
		RES CHIP 1608 1/10W J 22k Ω	RRXA223YF002
R1705		CHIP RES. 1/10W J 470 Ω or	RRXAJR5Z0471
		RES CHIP 1608 1/10W J 470 Ω	RRXA471YF002
R1706		CHIP RES. 1/10W J 1k Ω or	RRXAJR5Z0102
		RES CHIP 1608 1/10W J 1.0k Ω	RRXA102YF002
R1708		CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
		CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R1709		CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
		CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R1712		CHIP RES. 1/10W J 1.2k Ω or	RRXAJR5Z0122
		RES CHIP 1608 1/10W J 1.2k Ω	RRXA122YF002
R1713		CHIP RES. 1/10W J 33k Ω or	RRXAJR5Z0333
		RES CHIP 1608 1/10W J 33k Ω	RRXA333YF002
R1714		CHIP RES. 1/10W J 470 Ω or	RRXAJR5Z0471
		RES CHIP 1608 1/10W J 470 Ω	RRXA471YF002
R1718		CHIP RES. 1/10W J 16k Ω or	RRXAJR5Z0163
		RES CHIP 1608 1/10W J 16k Ω	RRXA163YF002
R1719		CHIP RES. 1/10W J 16k Ω or	RRXAJR5Z0163

Ref. No.	Mark	Description	Part No.
		RES CHIP 1608 1/10W J 16k Ω	RRXA163YF002
R1720		CHIP RES. 1/10W J 33k Ω or	RRXAJR5Z0333
		RES CHIP 1608 1/10W J 33k Ω	RRXA333YF002
R1721		CHIP RES. 1/10W J 33k Ω or	RRXAJR5Z0333
		RES CHIP 1608 1/10W J 33k Ω	RRXA333YF002
R1722		CHIP RES. 1/10W J 18k Ω or	RRXAJR5Z0183
		RES CHIP 1608 1/10W J 18k Ω	RRXA183YF002
R1723		CHIP RES. 1/10W J 27k Ω or	RRXAJR5Z0273
		RES CHIP 1608 1/10W J 27k Ω	RRXA273YF002
R1724		CHIP RES. 1/10W J 15k Ω or	RRXAJR5Z0153
		RES CHIP 1608 1/10W J 15k Ω	RRXA153YF002
R1725		CHIP RES. 1/10W J 33k Ω or	RRXAJR5Z0333
		RES CHIP 1608 1/10W J 33k Ω	RRXA333YF002
R1726		CHIP RES. 1/10W J 18k Ω or	RRXAJR5Z0183
		RES CHIP 1608 1/10W J 18k Ω	RRXA183YF002
R1727		CHIP RES. 1/10W J 27k Ω or	RRXAJR5Z0273
		RES CHIP 1608 1/10W J 27k Ω	RRXA273YF002
R1728		CHIP RES. 1/10W J 15k Ω or	RRXAJR5Z0153
		RES CHIP 1608 1/10W J 15k Ω	RRXA153YF002
R1729		CHIP RES. 1/10W J 33k Ω or	RRXAJR5Z0333
		RES CHIP 1608 1/10W J 33k Ω	RRXA333YF002
SWITCHES			
SW506		LEAF SWITCH MXS01830MVP0	SSC0101MCE03
SW507		SWITCH ROTARY SSS-53MD-1	SSR0106KB004
SW521		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW522		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW523		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW524		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW525		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW526		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW527		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW528		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW601		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW603		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW605		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
MISCELLANEOUS			
2B16		BUSH LED(F) H3700UD	0VM409508
2B17		SHIELD ASSEMBLY(T3 PAL) E3B90ED	1VM425280
2B46		ROHM HOLDER H7770JD	0VM304573
FL601		FL 7-BT-310N	TVFD1C0FT056
JK1501		RCA JACK MSP-213V1-652-B NI L	JXRL030LY116
JK1502		RGB CONNECTOR MRC-021V-05 ABS(B110	JXGL210LY008
JK1503		FIBER OPTIC TRANS.MODULE 0C-0805T*002 or	JWHHA00JD002
		OPTICAL TRANSMITTING MODULE JST1162	JWHHA00SLT01
JK1504		RCA JACK MSP-281V41-B(B110)	JXRL010LY140
JK1505		RCA JACK MSP-382V-12 NILF	JXRL020LY120
JK1506		S TYPE JACK MDC-050V-2.4 LF(B110 or	JXEL040LY003
		S TYPE JACK DIN-425-01	JXEL040YUQ01
JW001		FLAT CABLE 4P AWG26#2651/P2.0/100	WX1E9B00-007
JW101		WIRE ASSEMBLY 30PIN FFC 30PIN/ 150MM	WX1E9G00-002
JW102		WIRE ASSEMBLY 30PIN FFC 30PIN/ 150MM	WX1E9G00-002
PS502		PHOTO INTERRUPTER RPI-302C70	QPWZP1302C70
RM1501		SENSOR REMOTE RECEIVER KSM-602LU2S or	USESJRSKK048
		REMOTE RECEIVER PIC-37042LU or	USESJRSKK033
		REMOTE RECEIVER MIM-93M6DKF	USESJRSUNT01
TP301		PCB JUMPER D0.6-P17.0	JW17.0T
TP501		PCB JUMPER D0.6-P5.0	JW5.0T
TP503		PCB JUMPER D0.6-P7.0	JW7.0T
TP504		PCB JUMPER D0.6-P25.5	JW25.5T
TU1501		TUNER UNIT TMFE2-303A	UTUNPLGAL020
VR501		CARBON P.O.T. VZ067TL1 B104 PB(F)	VRCB104HH014
X301		XTAL 4.433619MHz or	FXC445LLN004
		XTAL 1K*044334EE	FXC445LDS002
X501		QUARTS CRYSTAL 12.000000MHz or	FXD126LCHE01
		XTAL 12MHz 12.000MHz	FXD126LDS002
X502		RESONATOR XTAL 32.768kHz QTF38-32.768K125P15L or	FXC323LQUA03
		XTAL DT38 32.768kHz	FX0323LDS001

POWER SW CBA

Ref. No.	Mark	Description	Part No.
		POWER SW CBA (MCV-B) Consists of the following:	---------
DIODE			
D671		LED(RED) 204HD/E	NPQZ00204HDE
SWITCHES			
SW671		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01

FUNCTION CBA

Ref. No.	Mark	Description	Part No.
		FUNCTION CBA (MCV-C) Consists of the following:	---------
SWITCHES			
SW681		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW682		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
MISCELLANEOUS			
JW002		FLAT CABLE 3P AWG26#2651/P2.0/80	WX1E9B00-004

FRONT JACK CBA

Ref. No.	Mark	Description	Part No.
		FRONT JACK CBA (MCV-D) Consists of the following:	---------
CAPACITORS			
C1205		CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
C1206		CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
CONNECTOR			
CN1201		FE CONNECTOR TOP 8P 08FE-BT-VK-N	JCFEJ08JG001
DIODES			
D1544		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26

Ref. No.	Mark	Description	Part No.
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D1545		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D1546		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D1547		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
		RESISTORS	
R1201		CHIP RES. 1/10W J 75 Ω or	RRXAJR5Z0750
		RES CHIP 1608 1/10W J 75 Ω	RRXA750YF002
R1202		CHIP RES. 1/10W J 75 Ω or	RRXAJR5Z0750
		RES CHIP 1608 1/10W J 75 Ω	RRXA750YF002
R1203		CHIP RES. 1/10W J 220 Ω or	RRXAJR5Z0221
		RES CHIP 1608 1/10W J 220 Ω	RRXA221YF002
R1204		CHIP RES. 1/10W J 220 Ω or	RRXAJR5Z0221
		RES CHIP 1608 1/10W J 220 Ω	RRXA221YF002
R1205		CHIP RES. 1/10W J 75 Ω or	RRXAJR5Z0750
		RES CHIP 1608 1/10W J 75 Ω	RRXA750YF002
		MISCELLANEOUS	
JK1201		RCA JACK(YELLOW) MTJ-032-11B-40 FE01	JXRL010LY101
JK1202		RCA JACK(WHITE) MTJ-032-11B-41 FE01	JXRL010LY102
JK1203		RCA JACK(RED) MTJ-032-11A-31 FE01	JYRL010LY024
JK1204		S TYPE JACK MDC-050V-2.4 LF(B110 or	JXEL040LY003
		S TYPE JACK DIN-425-01	JXEL040YUQ01
JW103		FFC CABLE 8P FFC/P1.25/120	WX1E9700-002

SENSOR CBA

Ref. No.	Mark	Description	Part No.
		SENSOR CBA Consists of the following:	1VSA11699
		TRANSISTORS	
Q503		PHOTO TRANSISTOR PT204-6B-12 or	NPWZT2046B12
		PHOTO TRANSISTOR MID-32A22F	NPWZ1D32A22F
Q504		PHOTO TRANSISTOR PT204-6B-12 or	NPWZT2046B12
		PHOTO TRANSISTOR MID-32A22F	NPWZ1D32A22F

PSV CBA

Ref. No.	Mark	Description	Part No.
		PSV CBA Consists of the following	1VSA15996
		POWER SUPPLY CBA (PSV-A) REAR JACK CBA (PSV-B)	---------- ----------

POWER SUPPLY CBA

Ref. No.	Mark	Description	Part No.
		POWER SUPPLY CBA (PSV-A) Consists of the following:	----------
		CAPACITORS	
C013		ELECTROLYTIC CAP. 10μF/50V M or	CE1JMASDL100
		CAP ELECTROLYTIC 10μF/50V/M	CA1J100ENE12
C014		ELECTROLYTIC CAP. 470μF/16V M or	CE1CMASDL471
		CAP ELECTROLYTIC 470μF/16V/M	CA1C471ENE12
C015		ELECTROLYTIC CAP. 100μF/16V M or	CE1CMASDL101
		CAP ELECTROLYTIC 100μF/16V/M	CA1C101ENE12
C016		ELECTROLYTIC CAP. 2200μF/6.3V SL or	CE0KMZADL222
		ELECTROLYTIC CAP. 2200μF/6.3V M or	CE0KMZPDL222
		CAP ELECTROLYTIC 2200μF/6.3V/M	CA0K222ENE11
C017		ELECTROLYTIC CAP. 2200μF/6.3V SL or	CE0KMZADL222
		ELECTROLYTIC CAP. 2200μF/6.3V M or	CE0KMZPDL222
		CAP ELECTROLYTIC 2200μF/6.3V/M	CA0K222ENE11
C018		ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
		CAP ELECTROLYTIC 470μF/6.3V/M	CA0K471ENE12
C020		ELECTROLYTIC CAP. 22μF/50V M or	CE1JMASDL220
		CAP ELECTROLYTIC 22μF/50V/M	CA1J220ENE12
C022		ELECTROLYTIC CAP. 470μF/35V M or	CE1GMASDL471
		CAP ELECTROLYTIC 470μF/35V/M	CA1G471ENE12
C1001⚠		ACROSS THE LINE CAP. 0.068μF/250V or	CT2E683DC016
⚠		METALIZED FILM CAP. 0.068μF/250V M	CT2E683MS037
C1004		ELECTROLYTIC CAP. 100μF/400V M	CA2H101S6016
C1005		CERAMIC CAP. SL K 56pF/1KV or	CCD3AKPSL560
		CERAMIC CAP. SL J 56pF/1KV	CCD3AJPSL560
C1006⚠		SAFTY CAP. 2200pF/250V or	CCN2EMA0E222
⚠		SAFETY CAP. 2200pF/250V	CA2E222MR049
C1007		ELECTROLYTIC CAP. 1000μF/6.3V M or	CE0KMASDL102
		CAP ELECTROLYTIC 1000μF/6.3V/M	CA0K102ENE12
C1013		CERAMIC CAP.(AX) B J 1000pF/50V	CCA1JJT0B102
C1018		ELECTROLYTIC CAP. 100μF/10V M or	CE1AMASDL101
		CAP ELECTROLYTIC 100μF/10V/M	CA1A101ENE12
C1021		CERAMIC CAP.(AX) Y M 0.01μF/16V	CCA1CMT0Y103
C1025		CERAMIC CAP.(AX) B K 0.01μF/50V	CCA1JKT0B103
C1029		CERAMIC CAP.(AX) X K 1800pF/16V	CCA1CKT0X182
C1032		ELECTROLYTIC CAP. 47μF/16V M or	CE1CMASDL470
		CAP ELECTROLYTIC 47μF/16V/M	CA1C470ENE12
C1033		CERAMIC CAP. YV Z 0.022μF/50V	CCD1JZSYV223
C1035		ELECTROLYTIC CAP. 3300μF/6.3V SL or	CE0KMZADL332
		ELECTROLYTIC CAP. 3300μF/6.3V SM or	CE0KMZPDL332
		CAP ELECTROLYTIC 3300μF/6.3V/M	CA0K332ENE11
C1036		CERAMIC CAP. B K 470pF/500V	CCD2JKP0B471
C1037		ELECTROLYTIC CAP. 1000μF/16V M or	CE1CMASDL102
		CAP ELECTROLYTIC 1000μF/16V/M	CA1C102ENE11
C1039		ELECTROLYTIC CAP. 470μF/16V M or	CE1CMASDL471
		CAP ELECTROLYTIC 470μF/16V/M	CA1C471ENE12
C1106		ELECTROLYTIC CAP. 100μF/35V M or	CE1GMASDL101
		CAP ELECTROLYTIC 100μF/35V/M	CA1G101ENE12
C2014		CERAMIC CAP. B K 0.01μF/500V	CCD2JKP0B103
		DIODES	
D013		RECTIFIER DIODE BA158 or	NDQZ000BA158
		DIODE FAST RECOVERY BA158 or	NDLZ00BA158S
		RECTIFIER DIODE BA158	NDWZ000BA158
D014		SCHOTTKY BARRIER DIODE SB190 or	NDQZ000SB190
		DIODE SCHOTTKY SB190 or	NDLZ00SB190S
		SCHOTTKY BARRIER DIODE SB190	NDWZ000SB190
D015		ZENER DIODE MTZJT-776.8B or	QDTB0MTZJ6R8
		DIODE ZENER 6V8BSB-T26 or	NDTB6R8BST26
		ZENER DIODE DZ-6.8BSBT265	NDTB0DZ6R8BS
D016		SCHOTTKY BARRIER DIODE SB340 or	NDQZ000SB340
		DIODE SCHOTTKY SB340 or	NDLZ00SB340S
		SCHOTTKY BARRIER DIODE SB340	NDWZ000SB340
D017		ZENER DIODE MTZJT-7715C or	QDTC00MTZJ15
		DIODE ZENER 15BSC-T26 or	NDTC015BST26
		ZENER DIODE DZ-15BSCT265	NDTC00DZ15BS
D018		RECTIFIER DIODE BA158 or	NDQZ000BA158
		DIODE FAST RECOVERY BA158 or	NDLZ00BA158S
		RECTIFIER DIODE BA158	NDWZ000BA158
D019		RECTIFIER DIODE FR203-B/P or	NDQZ000FR203
		DIODE FAST FR203	NDLZ00FR203S
D1001		DIODE 1N5397-B or	NDLZ001N5397
		DIODE RECTIFIER IN5397 or	NDLZ01N5397S
		DIODE 1N5397BD	NDL1001N5397
D1002		DIODE 1N5397-B or	NDLZ001N5397
		DIODE RECTIFIER IN5397 or	NDLZ01N5397S
		DIODE 1N5397BD	NDL1001N5397
D1003		DIODE 1N5397-B or	NDLZ001N5397
		DIODE RECTIFIER IN5397 or	NDLZ01N5397S
		DIODE 1N5397BD	NDL1001N5397
D1004		DIODE 1N5397-B or	NDLZ001N5397
		DIODE RECTIFIER IN5397 or	NDLZ01N5397S

Ref. No.	Mark	Description	Part No.
		DIODE 1N5397BD	NDL1001N5397
D1006		SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
		DIODE SWITCHING 1N4148-F0021 or	NDTZ01N4148F
		SWITCHING DIODE 1N4148M	NDTZ01N4148M
D1008		SCHOTTKY BARRIER DIODE SB140 or	NDQZ000SB140
		DIODE SCHOTTKY SB140 or	NDLZ00SB140S
		SCHOTTKY BARRIER DIODE SB140	NDWZ000SB140
D1011		RECTIFIER DIODE BA159 or	NDQZ000BA159
		DIODE FAST RECOVERY BA159 or	NDLZ00BA159S
		RECTIFIER DIODE BA159	NDWZ000BA159
D1012		SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
		DIODE SWITCHING 1N4148-F0021 or	NDTZ01N4148F
		SWITCHING DIODE 1N4148M	NDTZ01N4148M
D1016		SCHOTTKY BARRIER DIODE SB140 or	NDQZ000SB140
		DIODE SCHOTTKY SB140 or	NDLZ00SB140S
		SCHOTTKY BARRIER DIODE SB140	NDWZ000SB140
D1017		ZENER DIODE MTZJT-7720A or	QDTA00MTZJ20
		DIODE ZENER 20BSA-T26 or	NDTA020BST26
		ZENER DIODE DZ-20BSAT265	NDTA00DZ20BS
D1018		SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
		DIODE SWITCHING 1N4148-F0021 or	NDTZ01N4148F
		SWITCHING DIODE 1N4148M	NDTZ01N4148M
D1019		ZENER DIODE MTZJT-776.8B or	QDTB0MTZJ6R8
		DIODE ZENER 6V8BSB-T26 or	NDTB6R8BST26
		ZENER DIODE DZ-6.8BSBT265	NDTB0DZ6R8BS
D1022		SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
		DIODE SWITCHING 1N4148-F0021 or	NDTZ01N4148F
		SWITCHING DIODE 1N4148M	NDTZ01N4148M
D1023		PCB JUMPER D0.6-P5.0	JW5.0T
D1024		SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
		DIODE SWITCHING 1N4148-F0021 or	NDTZ01N4148F
		SWITCHING DIODE 1N4148M	NDTZ01N4148M
D1025		SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
		DIODE SWITCHING 1N4148-F0021 or	NDTZ01N4148F
		SWITCHING DIODE 1N4148M	NDTZ01N4148M
D1030		SCHOTTKY BARRIER DIODE SB240-B/P or	NDQZ000SB240
		DIODE SCHOTTKY SB240 or	NDLZ00SB240S
		SCHOTTKY BARRIER DIODE SB240-B/P	NDWZ000SB240
D1031		SCHOTTKY BARRIER DIODE SB390 or	NDQZ000SB390
		DIODE SCHOTTKY SB390 or	NDLZ00SB390S
		SCHOTTKY BARRIER DIODE SB390	NDWZ000SB390
D1032		SCHOTTKY BARRIER DIODE SB340 or	NDQZ000SB340
		DIODE SCHOTTKY SB340 or	NDLZ00SB340S
		SCHOTTKY BARRIER DIODE SB340	NDWZ000SB340
ICS			
IC1001 ⚠		PHOTOCOUPLER EL817A or	NPEA000EL817
⚠		PHOTOCOUPLER EL817B or	NPEB000EL817
⚠		PHOTOCOUPLER PS2561A-1(Q) or	QPEQPS2561A1
⚠		PHOTOCOUPLER PS2561A-1(W)	QPEWPS2561A1
COILS			
L010		RADIAL TYPE CHOKE COIL CW68-470K-841040NP or	LLBD00PKV023
		CHOKE COIL 47μH or	LLBD00PKV022
		CHOKE COIL 47μH-K	LLBD00PKT001
L013		RADIAL TYPE CHOKE COIL CW68-470K-841040NP or	LLBD00PKV023
		CHOKE COIL 47μH or	LLBD00PKV022
		CHOKE COIL 47μH-K	LLBD00PKT001
L1001		BEAD CORE ASSEMBLY E9GA0BD	1VSA15812
L1002		BEAD CORE ASSEMBLY E9GA0BD	1VSA15812
L1003⚠		LINE FILTER 56MH TLF14CB5630R2 or	LLBG00ZTU022
⚠		LINE FILTER 50MH LF-4D-E503(PB FREE)	LLBG00ZKQ014
L1004		BEAD CORE B16 RH 3.5X10X1.3 or	XL03010XM001
		BEAD CORE HF70BB3.5X10X1.3	XL03010TE001
L1005		BEAD CORE ASSEMBLY E9GA0BD	1VSA15812

Ref. No.	Mark	Description	Part No.
L1011		RADIAL TYPE CHOKE COIL CW68-470K-841040NP or	LLBD00PKV023
		CHOKE COIL 47μH or	LLBD00PKV022
		CHOKE COIL 47μH-K	LLBD00PKT001
L1013		POWER INDUCTORS CWKBNP-180K or	LLF1800KV002
		POWER INDUCTORS TWKBNP-180K or	LLC180KKV007
		CHOKE COIL(18μH) LHL10NB180K	LLARKGQTU180
TRANSISTORS			
Q1001⚠		FET 2SK3566	QFWZ02SK3566
Q1003		TRANSISTOR 2SC1815-Y(TE2 F T)	QQSY2SC1815F
Q1004		TRANSISTOR KTA1267-Y-AT/P or	NQSYKTA1267P
		TRANSISTOR KTA1267-GR-AT/P	NQS1KTA1267P
Q1008		TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
		TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
		TRANSISTOR 2SC1815-Y(TE2 F T) or	QQSY2SC1815F
		TRANSISTOR 2SC1815-GR(TE2 F T)	QQS12SC1815F
RESISTORS			
R057		CARBON RES. 1/6W J 220k Ω or	RCX6JATZ0224
		CARBON RES. 1/4W J 220k Ω	RCX4JATZ0224
R1002		CARBON RES. 1/4W J 560k Ω	RCX4JATZ0564
R1003		CARBON RES. 1/4W J 680k Ω	RCX4JATZ0684
R1004		METAL OXIDE FILM RES. 2W J 82k Ω or	RN02JZLZ0823
		METAL OXIDE FILM RES. 2W J 82k Ω	RN02JZPZ0823
R1005		CARBON RES. 1/4W J 1M Ω	RCX4JATZ0105
R1006		CARBON RES. 1/4W J 1M Ω	RCX4JATZ0105
R1007		CARBON RES. 1/4W J 1M Ω	RCX4JATZ0105
R1008		CARBON RES. 1/4W G 820 Ω	RCX4GATZ0821
R1010		CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
		CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R1011		METAL OXIDE FILM RES. 1W J 1.3 Ω or	RN01JZLZ01R3
		METAL OXIDE FILM RES. 1W J 1.3 Ω	RN01JZPZ01R3
R1020		CARBON RES. 1/6W J 1.8k Ω or	RCX6JATZ0182
		CARBON RES. 1/4W J 1.8k Ω	RCX4JATZ0182
R1021		CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1022		CARBON RES. 1/6W J 4.7k Ω or	RCX6JATZ0472
		CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R1023		CARBON RES. 1/6W G 2.2k Ω or	RCX6GATZ0222
		CARBON RES. 1/4W G 2.2k Ω	RCX4GATZ0222
R1024		CARBON RES. 1/6W J 68k Ω or	RCX6JATZ0683
		CARBON RES. 1/4W J 68k Ω	RCX4JATZ0683
R1025		CARBON RES. 1/6W G 5.6k Ω or	RCX6GATZ0562
		CARBON RES. 1/4W G 5.6k Ω	RCX4GATZ0562
R1029		CARBON RES. 1/6W J 100k Ω or	RCX6JATZ0104
		CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R1032		CARBON RES. 1/6W J 2.2k Ω or	RCX6JATZ0222
		CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R1035		CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1036		CARBON RES. 1/6W J 100k Ω or	RCX6JATZ0104
		CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R1037		CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
		CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R1038		CARBON RES. 1/6W J 100k Ω or	RCX6JATZ0104
		CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R1039		CARBON RES. 1/6W J 470k Ω or	RCX6JATZ0474
		CARBON RES. 1/4W J 470k Ω	RCX4JATZ0474
R1040		CARBON RES. 1/4W J 10 Ω	RCX4JATZ0100
R1041		CARBON RES. 1/4W J 10 Ω	RCX4JATZ0100
R1043		METAL OXIDE FILM RES. 1W J 2.7 Ω or	RN012R7ZU001
		METAL OXIDE FILM RES. 1W J 2.7 Ω	RN012R7DP003
R1058		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1059		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1126		CARBON RES. 1/6W J 33k Ω or	RCX6JATZ0333
		CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333
MISCELLANEOUS			
2B18		HEAT SINK E6800ED	1VM420987

Ref. No.	Mark	Description	Part No.
2L019		SCREW S-TIGHT M3X8 BIND HEAD+	GBJS3080
AC1001 ⚠		AC CORD W/O A GND WIRE CEE / 1760MM /ANTITR or	WAE0172LW014
⚠		AC CORD W/O A GND WIRE CEE/ 1760MM/ANTITRACK	WAE0172LTE09
F1001⚠		FUSE T1.6AL/250V or	PAGC20BW3162
⚠		FUSE 50T016H 1.6A/250V	PAGH20BHV162
FH1001		FUSE HOLDER MSF-015 LF (B110) or	XH01Z00LY002
		FUSE HOLDER DFH-001	XH01Z00RP001
FH1002		FUSE HOLDER MSF-015 LF (B110) or	XH01Z00LY002
		FUSE HOLDER DFH-001	XH01Z00RP001
JW1001		WIRE ASSEMBLY 34PIN FFC 34PIN/ 105MM	WX1E9G00-001
T0011⚠		TRANS POWER 7717 or	LTT2PE0KT023
⚠		TRANS POWER BCK-28-9953	LTT2PE0XB021

REAR JACK CBA

Ref. No.	Mark	Description	Part No.
		REAR JACK CBA (PSV-B) Consists of the following:	---------
		CAPACITORS	
C2003		CERAMIC CAP.(AX) B K 2200pF/50V	CA1J222TU011
C2004		CERAMIC CAP.(AX) B K 2200pF/50V	CA1J222TU011
C2005		CERAMIC CAP.(AX) B K 2200pF/50V	CA1J222TU011
C2006		CERAMIC CAP.(AX) B K 2200pF/50V	CA1J222TU011
C2007		CERAMIC CAP.(AX) B K 2200pF/50V	CA1J222TU011
C2008		CERAMIC CAP.(AX) B K 1000pF/50V	CCA1JKT0B102
C2009		ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1μF/50V/M	CA1J1R0ENE12
C2010		ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1μF/50V/M	CA1J1R0ENE12
C2011		CERAMIC CAP.(AX) B K 1000pF/50V	CCA1JKT0B102
C2012		ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASDL1R0
		CAP ELECTROLYTIC 1μF/50V/M	CA1J1R0ENE12
C2013		CERAMIC CAP.(AX) B K 1000pF/50V	CCA1JKT0B102
		DIODES	
D2001		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D2002		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D2003		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D2004		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D2005		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D2006		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D2007		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D2008		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D2009		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
D2010		ZENER DIODE MTZJT-7711A or	QDTA00MTZJ11
		DIODE ZENER 11BSA-T26 or	NDTA011BST26
		ZENER DIODE DZ-11BSAT265	NDTA00DZ11BS
		COIL	
L2001		BEAD CORE ASSEMBLY E9GA0BD	1VSA15813
		TRANSISTORS	
Q2002		TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
		TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
		TRANSISTOR 2SC1815-Y(TE2 F T) or	QQSY2SC1815F
		TRANSISTOR 2SC1815-GR(TE2 F T)	QQS12SC1815F
Q2003		TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
		TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
		TRANSISTOR 2SC1815-Y(TE2 F T) or	QQSY2SC1815F
		TRANSISTOR 2SC1815-GR(TE2 F T)	QQS12SC1815F
		RESISTORS	
R2003		CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R2004		CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R2005		CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R2006		CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R2007		CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R2008		CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R2009		CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R2010		CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R2011		CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R2012		CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R2013		CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
		MISCELLANEOUS	
2B60		21P EARTH PLATE E7B20ED	1VM423185
JK2001		RGB CONNECTOR MRC-021V-03 ABS(B11	JXGL210LY006
JW2001		WIRE ASSEMBLY FLAT CABLE 14P AWG26#2561/P2.0/65	WX1E9G00-003

AFV CBA

Ref. No.	Mark	Description	Part No.
	A B,C	AFV CBA AFV CBA Consists of the following:	1VSA15651 1VSA15656
		CAPACITORS	
C1		CHIP CERAMIC CAP.(1608) F Z 0.1μF/ 50V or	CHD1JZ30F104
		CHIP CERAMIC CAP.(1608) F Z 0.1μF/ 25V	CHD1EZ30F104
C4		CHIP CERAMIC CAP. CH J 56pF/50V	CHD1JJ3CH560
C5		CHIP CERAMIC CAP.(1608) CH J 22pF/ 50V	CHD1JJ3CH220
C6		CHIP CERAMIC CAP. CH J 56pF/50V	CHD1JJ3CH560
C7		CHIP CERAMIC CAP. CH C 3pF/50V or	CHD1JC3CH3R0
		CHIP CERAMIC CAP. CJ C 3pF/50V or	CHD1JC3CJ3R0
		CHIP CERAMIC CAP. CH D 3pF/50V	CHD1JD3CH3R0
C8		CHIP CERAMIC CAP. CH C 3pF/50V or	CHD1JC3CH3R0
		CHIP CERAMIC CAP. CJ C 3pF/50V or	CHD1JC3CJ3R0
		CHIP CERAMIC CAP. CH D 3pF/50V	CHD1JD3CH3R0
C11		CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C12		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASSL100
C13		CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C14		CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V	CHD1JK30B103
C15		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASSL100
C16		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASSL100
C17		CHIP CERAMIC CAP.(1608) F Z 0.1μF/ 50V or	CHD1JZ30F104
		CHIP CERAMIC CAP.(1608) F Z 0.1μF/ 25V	CHD1EZ30F104
C19		CHIP CERAMIC CAP.(1608) F Z 0.1μF/ 50V or	CHD1JZ30F104
		CHIP CERAMIC CAP.(1608) F Z 0.1μF/ 25V	CHD1EZ30F104
C20		ELECTROLYTIC CAP. 3.3μF/50V M H7	CE1JMASSL3R3
C21		CHIP CERAMIC CAP.(1608) F Z 0.1μF/ 50V or	CHD1JZ30F104
		CHIP CERAMIC CAP.(1608) F Z 0.1μF/ 25V	CHD1EZ30F104

Ref. No.	Mark	Description	Part No.
C22		ELECTROLYTIC CAP. 10µF/16V M H7	CE1CMASSL100
C24		ELECTROLYTIC CAP. 0.22µF/50V M H7	CE1JMASSLR22
C27		CERAMIC CAP.(AX) F Z 0.1µF/50V	CCA1JZTFZ104
CONNECTOR			
CN1		ANGLE PIN HEADER 9P IMSA-6029B-1-09Z003-	JTED009ER045
DIODES			
D2		SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
		DIODE SWITCHING 1N4148-F0021 or	NDTZ01N4148F
		SWITCHING DIODE 1N4148M	NDTZ01N4148M
ICS			
IC1	A	IC AUDIO PROCESSOR MSP3407G-QG-B8-V3	NSZBA0SP3004
IC1	B,C	IC AUDIO PROCESSOR MSP3417G-QG-B8-V3	NSZBA0SP3005
COILS			
L1		INDUCTOR 10µH-K-5FT	LLARKBSTU100
L2		PCB JUMPER D0.6-P5.0	JW5.0T
L3		INDUCTOR 18µH-K-26T	LLAXKATTU180
L4		INDUCTOR 10µH-K-5FT	LLARKBSTU100
RESISTORS			
R1		CHIP RES. 1/10W J 1k Ω or	RRXAJR5Z0102
		RES CHIP 1608 1/10W J 1.0k Ω	RRXA102YF002
R4		CHIP RES. 1/10W J 120k Ω or	RRXAJR5Z0124
		RES CHIP 1608 1/10W J 120k Ω	RRXA124YF002
R5		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
		RES CHIP 1608 1/10W J 0 Ω	RRXA000YF002
R6		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R6		RES CHIP 1608 1/10W J 0 Ω	RRXA000YF002
MISCELLANEOUS			
X1		XTAL 18.432MHz	FXD186LLN001
X1		RESONATOR XTAL 186 910A018432-1030300	FXD186LXGE01

W4A-A4180DB/W4A-D4180DB/W4D-D4180DB
E9G00/03/04ED
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